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HOSPITAL RESTRUCTURING AND PROCESS REDESIGN:
ARE WE IMPROVING OUR HEALTH CARE SYSTEMS?

by

Lois Marion Reid

A thesis submitted in conformity with the requirements
for the degree of Doctor of Education
Department of Adult Education, Community Development
and Counselling Psychology
Ontario Institute for Studies in Education in the
University of Toronto

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Abstract

Scarborough General Hospital (SGH) was faced with ongoing funding and bed reductions that resulted in the need to dramatically change the way in which it provided services. By utilizing SGH’s longitudinal database, selected external reviews and internal committee documentation, the effects of the hospital’s organizational restructuring and process redesign on access, scope, financial viability, satisfaction and quality were investigated.

Findings indicated the hospital’s new organizational structure balanced the economy of a centralized model with the flexibility of a decentralized model. The chosen patient centered care delivery model was successful in achieving cross-functional teams, empowerment of staff, expanded roles for registered nurses and registered practical nurses and multi-skilling. Care pathways successfully reduced the length of stay and patient aggregations supported efficient delivery of care. The patient centered care approach brought selected services closer to the patient and maximized the efficient use of resources.

The study indicated the hospital’s change initiatives were pro-active, creative and effective. Patient’s access to services was maintained, scope of services were expanded,
measures remained within acceptable levels. The hospital also maintained financial stability and achieved one of the lowest “costs per case” in its peer group throughout the period of the review (1994/95 - 1997/98).

The study identified the hospital’s strategy of simultaneously layering multiple change projects, coupled with very aggressive time frames, failed to recognize staffs’ need to achieve an appropriate learning curve. Insufficient time was available for staff to incorporate new learning into their personal paradigms and practice patterns. Better alignment of individual change strategies with the overall strategic plan was needed to ensure that the advantages gained would be sustainable.

It was concluded that organizational redesign that is well managed over the long term can result in minimal disruption to patient care, maintained access to services and sustained quality of care. Factors identified as affecting successful change include stability of funding, commitment of adequate resources to support the change initiatives and ability to coordinate and link the individual change initiatives into the overall change design.
Acknowledgments

Lifelong learning is a challenge that never ends. It requires energy and commitment and an ability to see beyond our current paradigms. Many of us have been fortunate to have family, friends, and mentors that have supported us in our journey and have advocated for us along the way. Most of us need encouragement and assistance to structure new questions that will allow us to explore new answers and through this process continue our growth. This is not an easy endeavor! The obstacles are many, and at times have seemed unlimited in their variety, but always there is the personal sense of achievement as each obstacle is met and overcome.

I am grateful for having had the opportunity to pursue my education and meet the many students and faculty that have influenced my learning in so many ways. I hope to be able to return something of what I have gained by actively coaching and mentoring others either in a formal teaching environment, in my work environment, or simply as a parent or friend.
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CHAPTER ONE: THE PROBLEM

Introduction

Parsons and Murdaugh (1994), state that “the one constant in health care today is that it is always in a state of flux” (p. 3). This state of disequilibrium in the overall health care system has meant that past practices have required careful scrutiny, especially in the areas of organizational structure and care delivery processes. Until very recently, there has been little, if any, change in the internal organizational structure of hospitals, and almost no focus on examining the impact of various organizational and patient care delivery models on access, affordability and satisfaction.

This concern about the need to address how hospital organizations are structured and how services are delivered was reflected in the Health Services Restructuring Commission’s report (July 1997) which stated that hospital systems continue to be characterized by duplication of services and surplus capacity, and that relatively little has changed in the overall organization of the hospital systems in the last decade (p. 2). The Metropolitan Toronto Health Services Restructuring Commission describes the health care delivery system in Metropolitan Toronto as “being unparalleled in size and complexity as compared to those in the rest of Ontario” (p. 1). They go on to describe the extensive and wide reaching changes that have challenged health care organizations over the past few years: changes that emphasized the need to rationalize,
consolidate and integrate services, making the need for restructuring and a systems approach paramount (p. 1).

Many would say that in the 1990's the fundamental principles of the health delivery system are under siege, with growing pressures to find new ways of delivering quality health care in a more efficient, effective, and affordable way. Some of the challenges health care organizations have faced include: a country-wide recession that forced federal and provincial governments to drastically reduce the size of the public sector and its transfer agencies; continually rising health care costs with little if any evidence of a healthier population; an aging population; increasing consumer expectations for quality of services; and an increasing demand for lower taxes.

These changes, coupled with the government-driven hospital restructuring process, have forced health care organizations to review and question past practices and to seriously challenge the status quo. Never has there been such a need for change, innovation and creativity. Some hospitals have moved quickly to adjust service delivery and organizational design in response to the growing financial pressures of rising costs, decreased funding and higher consumer expectations. There has been clear recognition at both the government and hospital level that there must be a re-balancing of hospital resources and a greater emphasis on accountability through performance improvements if hospitals are to provide quality services with decreasing resources, fewer facilities and changing roles.
The clear and consistent message coming from the Ontario Ministry of Health and the Health Services Restructuring Commission (HSRC) is that hospitals should no longer be the center of the health delivery system. They also point out that considerable reinvestment must occur in the community sector in order to shift the focus of services from hospitals to the broader range of care providers. This move towards a more integrated health care system (which includes community health care agencies, nurse practitioners, and hospitals) requires a change in structure, role and accountability for all service providers.

Overall, hospital response to this urgent demand for change has been slow and painful. The work of the Metro Toronto District Health Council (MTDHC) and its 1995 restructuring project (mandated by the Ontario Ministry of Health) provided the background for the work of the Health Services Restructuring Commission (HSRC) in the Toronto area. The MTDHC reviewed the services provided by the 44 publicly-funded hospitals located in the Toronto area and made detailed recommendations for the changes required to achieve a coordinated more efficient hospital system that would better respond to the health care needs of the community within a rapidly changing environment. The Health Services Restructuring Commission (HSRC) built upon the work of the MTDHC and proceeded to carry out an additional analysis of the Toronto area hospitals. This detailed review, completed in 1997, resulted in directives to restructure Toronto hospitals by directing hospital closures, amalgamations, program transfers, and any other necessary
actions to achieve the required efficiencies, savings, and clinical coherence of programs and services.

The HSRC identified their criteria for the evaluation as quality, accessibility, and affordability. Their definition of the criteria included: *Quality* focused on the issue of what was the required critical mass that would determine the level of program and clinical activity to maximize the efficiency and effectiveness of service delivery. This was aimed at achieving the most effective outcomes possible by concentrating specialized skills and expertise and providing for appropriate staffing levels within selected centres. The issue of clinical coherence explored the clinical relationships between different programs and services in terms of maximizing the continuum of patient care requirements for a single care episode, providing a coordinated response to care using a variety of related services, and minimizing duplication. *Accessibility* focused on the options to meet population needs, ensure proximity of services to the population being served, minimize patient transfers and ensure accessibility to the full range of primary, secondary, and specialized acute care services. *Affordability* focused on options to contribute to clinical efficiencies, achieve financial savings in the broader system, achieve administrative efficiencies, ensure the consolidation of support services, minimize capital and implementation costs, and support reinvestment in local and district health systems.

In considering the attempts of hospitals to respond to the many demands for change (which included the directives of the HSRC), it is important to recognize that until very recently Toronto hospitals have failed to question the fundamental way in which they
provided patient care and support services. Even when work processes were analyzed, interdepartmental structure and job roles were not routinely considered as part of the change process. As Parsons and Murdaugh (1994) point out “basically everything was tried within existing organizational boundaries to improve the hospital’s efficiency” (p. 5). It became increasingly evident that the old organizational models and old ways of doing things were no longer options. Those organizations that were able to respond quickly and efficiently to the pressures for change would be the organizations that would continue to play a key role within the newly integrated health care system.

**Background to the Problem**

Toronto hospitals were placed in a situation where they had to respond to directives for a restructured integrated health care delivery system (IDS) that required a new role for hospitals. The goal of an IDS is to ensure that patients and their families receive quality, cost effective care that is comprehensive and meets their needs in a timely and appropriate manner. Within an integrated delivery system, the patient is seen as the center of all activity, with services focusing on and being driven by patient needs.

This push towards an IDS resulted in an urgent need for hospitals to look very carefully at where they fit into the overall health delivery system, how they were organized and how they did business. As indicated, the government’s goal was to achieve an integrated health care delivery system (IDS) in which health care services would be co-
ordinated, health care practitioners would be able to communicate and share information, and resources would be utilized efficiently. This was especially difficult since hospitals were responding to these demands in the absence of an environment that was able to support this type of system. There are no structures to support this integrated delivery system (patient referral structures, funding structures, information and communication systems) and there is no clear vision of what the new role for hospitals should be.

One of the major obstacles facing hospitals in their attempts to respond to the restructuring directives was that organizational structures of most hospitals had remained essentially unchanged from those established in the 1920's and 1930's. As Wakefield et al. (1994) indicate, the organizational structure in hospitals was based on a medical model and was driven by physician specialization. This resulted in an increasing number of discrete patient-care services (orthopaedics, paediatrics, cardiology etc.) and created hospitals that were highly bureaucratic and inefficient, with extensive vertical management hierarchies that supported separate and distinct compartmentalized organizational structures. The authors state that "we are faced with the uncomfortable realization that health specialization and service compartmentalization may be working at cross-purposes with customer expectations and needs" (p. 153). In other words, hospitals served the needs of care providers rather than the needs of patients and families. They needed to recognize the urgency for redesign of basic business processes in order to achieve a sustainable future and be a vital part of the new restructured health care system.
A key implication of this paradigm shift is that the hospitals' organizational structure and patient-care processes should be redesigned around meeting the needs of the patient rather than those of the particular health care professional” (Wakefield et al. 1994, p. 156). This focus on a patient-centered approach to care delivery is consistent with a model called patient-centered care that places the needs of the patient at the forefront of any activity. Placing the focus on the needs of the patient, rather than the needs of the organization or the professional caregiver, is why many hospitals decided to use this patient-centered care model for their individual redesign and change initiatives.

In most hospitals, the restructuring process used a consultative process involving most of the key stakeholders. Through employee involvement and more effective work processes, it was hoped that gains in job satisfaction would result in a more efficient and effective organization. This lengthy and involved process was recognized as being essential to the change process, since without the involvement of the front line health care providers there would be little hope of achieving sustainable change. Involvement of committed staff in the change process was required to support the future role of hospitals.

Toronto hospitals, faced with the demands for a restructured health care system responded in a variety of ways. Many hospitals began their process of change in response to the recommendations of the Metro Toronto District Health Council’s 1995 restructuring report. In order to be pro-active and secure a viable position in the future health care system, some hospitals initiated amalgamation agreements with sister organizations, some formed partnerships in specialized service areas, some eliminated
services they could no longer support, and some simply did nothing. The hospitals that
initiated internal change strategies, which included organizational restructuring and
process redesign, did so to varying degrees and with varying success. The one common
factor in all of the change projects was the consistent lack of evaluation mechanisms: the
inability to determine the impact of the changes on a patient’s ability to access care, the
cost effectiveness of services, and the quality of care and services being proved.

Statement of the Problem

Scarborough General Hospital was one of the Toronto hospitals that recognized
the need for change. Like other hospitals in Toronto, SGH was faced with ongoing
funding and bed reductions resulting in a need to dramatically change the way in which it
operated and provided services. In addition to utilization improvements, Scarborough
General Hospital needed to address its organizational structure and its care delivery
processes. To do this, the hospital had to design and implement a change strategy that
would achieve the desired changes as quickly and effectively as possible. Once the change
strategies were achieved the hospital need to determine what effect these changes had on
its ability to continue to provide quality care and service to the community it served. The
effects of these change strategies became the focus for this study and through the use of
meta-analysis procedures the restructuring process at Scarborough General Hospital were
examined in order to determine the effects of restructuring and process redesign on access, scope, financial viability, quality and satisfaction.

Given the need for dramatic change, SGH’s organizational restructuring and process or work redesign was carried out with minimal emphasis on the evaluation of the end results. Like many other hospitals, most of the changes occurred at the individual level with little if any view to system-wide implications or human resource impact. Within the organization there was a concern that commitment and shared values were being lost. There was also the concern that staff were losing their sense of control, worth, and identity, and as a result much of their career and job satisfaction. Since these changes in attitude and morale are often reflected in the use of sick time, the use of employee support programs such as the Employee Rehabilitation Program (ERP) and the Employee Assistance Program (EAP) it became important to evaluate the impact of the change initiatives in these areas. It was recognized that morale can also influence the number and nature of complaints the organization receives as well as in the results of various patient satisfaction surveys and so these should also be monitored and evaluated.

When evaluating Scarborough General Hospital’s response to the demands for change and the outcomes achieved it is important to gain an understanding of how the hospital has grown with the community it serves, and how it has traditionally responded to the need for change over time. Until 1950, the Township of Scarborough was a scattering of farms and rural communities with just 48,000 residents. Post-war prosperity brought business and industry into the area followed by new jobs and families. Municipal and
health care services faced increased demands and when the Sisters of Misericorde (who were operating a downtown hospital called St. Mary’s) heard of the need in Scarborough they purchased a 25-acre parcel of farmland on the northwest corner of Lawrence and McCowan Avenues.

Construction of Scarborough General Hospital began on April 17, 1954 and the hospital was officially opened on May 12, 1956 with 320 staff members and 185 inpatient beds. Construction of the hospital continued in various phases between 1956 and 1990 in an effort to meet the changing needs of a rapidly growing population. Over the years, Scarborough General Hospital’s service level to the community grew, and as community health care needs were recognized, new clinics and increased services were implemented. The hospital, at its peak, was designed to accommodate approximately 750 inpatient beds. The hospital’s current 1997 inpatient bed status is approximately 395 beds which will be further reduced to 305 beds by 1999, according to the recent Health Services Restructuring Commission’s report for Metro Toronto (HSRC Metro Report, July, 1997 Appendix A). Even with this substantial reduction of inpatient beds, Scarborough General remains one of the largest and busiest community hospitals in Metropolitan Toronto. It has a history of innovative programs, progressive techniques and a commitment to quality, education and research. The hospital has consistently been recognized externally for achievements in these areas.

Up to this point, the hospital has responded to restructuring directives by reducing the number of acute care beds while maintaining total patient volumes through a dramatic
shift to day surgery and ambulatory care services. Performance (utilization) improvements have centered on shifting appropriate patients from inpatient to outpatient care, reducing length of stay, facilitating prompt discharge to alternative care settings and maintaining high occupancy rates. In spite of these changes, the gap continues to widen between what the government is willing to fund, what consumers are demanding, what medical technology and knowledge can provide, and what the hospital can afford to deliver.

In addition to utilization improvements, Scarborough General Hospital needed to address its organizational structure and its care delivery processes. To do this, the hospital designed and implemented a change strategy that would achieve the desired changes as quickly and effectively as possible. Scarborough General Hospital, as an organization, recognized that to achieve change of this magnitude, effective management of the planning and change processes was essential. Recognition of the need for demonstrated leadership in the management of the change and the drive toward a systems-thinking approach was evident in the hospital’s up-front commitment and support of the project. Senior management sponsors were identified for the projects, appropriate committee and team structures were created to perform the work, and clearly stated terms of reference guided the whole process. There was also a commitment by the hospital’s Board and senior management team to ensure that the changes proposed would continue to support the hospital’s mission, vision, values and strategic directions. The hospital’s ability to continue to provide high quality services to its community remained a priority throughout the
change project. This commitment was reflected in the logo "Patients are priority", and was a common theme in many of the change teams’ discussions.

**Purpose of the Study**

The overall purpose of the study was to determine the effects of Scarborough General Hospital’s organizational restructuring and process redesign on its ability to ensure:

* appropriate, efficient and effective care and services,
* quality as defined by benchmarks and outcome indicators, and
* satisfaction of patients, staff and physicians.

In an effort to maintain fiscal viability, hospitals have utilized a multitude of approaches to achieve organizational restructuring and process redesign. At Scarborough General Hospital the model selected to guide the change process was the patient centered care model since by definition it supports cross-functional teams, empowerment of staff, collaborative practice, decentralized decision making, aggregation of patients, and continuity of care. Part of the study’s objective was to evaluate if this was an appropriate model to guide the hospital’s organizational and process redesign initiatives.
Research Questions

For the purposes of this study, the two research questions to be addressed were:

1. What are the effects of Scarborough General Hospital's organizational restructuring and process redesign initiatives on patients' access to care and services, the scope of care and services provided by the hospital to its community, and the hospital's financial and operational viability.

2. How do changes to care and service delivery models impact on quality of care and services, and satisfaction of patients, staff and physicians?

Importance of the Study

In the midst of the many changes occurring in the health care system there is a need to be able to link change strategies with outcomes. The key players in the system must be able to determine what changes are beneficial, what is the most effective way to achieve these changes and what should be the next steps. If the effects of process on outcomes are examined in terms of access, scope, financial viability, quality and satisfaction, then perhaps hospitals can be more pro-active rather than re-active in their approach to strategic planning, resource allocation, organizational redesign and overall management strategies.
The importance of this study is that it demonstrates the power of a meta-analysis process to evaluate, retrospectively, a change project using an existing longitudinal database. Through the analysis of internal and external reports this approach allows evaluation of projects (that were not adequately designed to include comprehensive measurement methodologies) and allows the effect of strategies on outcomes to be examined. The meta-analysis methodology used for this study is a variation or a different way of applying the traditional meta-analysis process. It was felt that by substituting SGH’s individual internal and external reports and data-sets for the “disparate studies” this process could be used to achieve an effective evaluation of the hospital’s change process. Content analysis provided qualitative summaries of documents and also helped quantify report content objectively according to the categories of access, scope, financial and operational viability, quality and satisfaction.

The study also demonstrates how a patient centered care model can be used by hospitals as an effective means of ensuring quality, cost, and satisfaction are achieved within an environment challenged by funding reductions, bed reductions and workplace uncertainty. If the results of organizational restructuring and process redesign can be reviewed and analyzed, and the effects of the process changes linked to the outcomes achieved, then evidence-based conclusions can be drawn as to the effectiveness and appropriateness of some of the strategies used.

The vision of an integrated delivery system (IDS) as proposed by the Ontario Hospital Association and the Health Services Restructuring Commission in 1998 is just
that - a vision. There has been no visible linkage or congruency between the directions issued by the HSRC and the achievement of the envisioned integrated system. There is no evidence of the planning required to implement this type of system - no funding schemes, no transfer of service plans, no methods to achieve capitation and rostering of patients and no human resource plan for the redeployment of qualified staff. In short, there is a lack of overall co-ordination and communication between the key players within health care (hospitals, community agencies and primary care providers) and the policy makers in the Ministry of Health with the potential loser being the patient.

Fiscal restraint, continued demands for improvement, and ongoing uncertainty are the realities of today’s health care environment. There is growing emphasis on ensuring the health care system provides more community based care, with hospital services becoming more focused on patients who are sicker, and have more complex technical care requirements. For employees responsible for the planning and delivery of health care services, there is fear of job loss, heavier workloads, higher stress levels, and potentially lower job satisfaction.

There is a fear that many of the changes being proposed in the Metropolitan Toronto Health Services Restructuring Report (1997) are not based on proven quality data and that the contribution of hospitals as an efficient and effective provider of health care services has been grossly underestimated. This fear is reflected in the speech given by David MacKinnon (1997), President of the Ontario Hospital Association to the Ontario Legislature’s Standing Committee on Finance and Economic Affairs. In this speech he
stated that "the restructuring of the health care system must be done in a way that is supported by evidence, not driven by ideology or abstract visions" (p. 1). He pointed out that there appears to be an assumption that services based in the community are more cost effective and achieve better outcomes but to date there is little hard evidence to support this belief.
CHAPTER TWO: REVIEW OF RELATED LITERATURE

Organization of the Present Chapter

This chapter contains a summary of current relevant literature relating to organizational restructuring and process redesign. The literature reviewed encompasses not only the field of health care, but also the fields of business, education and administration, since many of the pressures for change and many of the strategies for achieving change are similar and applicable to each sector. Review of the literature identified a vast array of change strategies and formulas for success. The challenge was to read through the morass of information and critically evaluate the different strategies for redesign and determine their appropriateness for use at Scarborough General Hospital. The framework for the literature review included changes to health care funding and the resulting implications for care and service delivery. It addressed overarching concepts that have been identified as contributors to achievement of successful change and the strengths and weaknesses of selected organizational and patient care delivery models (see Figure 1). Through the literature review process, the key determinants or overarching principles of successful change strategies included Total Quality Management or Continuous Quality Improvement, leadership, strategic planning, education, and organizational support systems.
### Overarching Principles

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<th><strong>TQM/CQI</strong></th>
<th><strong>Leadership</strong> - ability to</th>
<th><strong>Strategic Planning</strong></th>
<th><strong>Organizational Support Systems</strong></th>
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<td>* quality</td>
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<td>* strategic intent</td>
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### Major Goals of Scarborough General Hospital’s Organizational Restructuring and Process Redesign

* to foster team-based approaches to care and service delivery  
* to build a systems orientation which focused on the whole rather than the parts  
* to balance the economy of a centralized approach with the flexibility and speed of a decentralized approach  
* to increase medical staff involvement in planning and decision making  
* to decrease layers of management and consolidate patient service groups  
* to expand role of registered nurses (RN’s) and registered practical nurses (RPN’s)  
* to support multi-skilling and creation of new provider roles  

**Organizational Models Reviewed**  
- Traditional/functional  
- Shared governance  
- Program management  
- Service or product line  
- Matrix  

**Patient Care Delivery Models Reviewed**  
- Patient centered care  
- Managed care  
- Case management  
- Functional team based nursing  
- Primary nursing  
- Total patient care  

**Criteria for Selection of Organizational Model**  
* ability to support increased demand for cost effective, quality health care that meets identified patient needs  
* ability to respond to the changing patterns of health care  
* ability to support work redesign  

**Criteria for Selection of Care Delivery Model**  
* ability to support cross-functional teams  
* ability to support empowerment of staff  
* ability to promote collaborative practice  
* ability to support decentralized decision making  
* ability to support aggregation of patients  
* ability to increase continuity of care  

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*Figure 1. Represents the framework for review and discussion of the literature within the context of the goals for the overall organizational restructuring and process redesign initiative undertaken at Scarborough General Hospital.*
The overarching principles of successful change are discussed in detail. As indicated, they include the role of TQM/CQI, the need for appropriate leadership and the importance of strategically planning for coordinating and directing the change activities. The role of educational theory is reviewed, and the requirements of sufficient organizational supports that include time, energy and commitment of resources. The specific organizational models reviewed were the traditional or functional model, the shared governance model, program management, service/product line management, and the matrix model. The patient care delivery models examined included patient centered care, managed care, case management, functional team nursing, primary nursing, and total patient care.

Review of the Literature

Financial Viability of the Health Care System

Parsons and Murdaugh (1994) stated that "the key issue facing health care today is how to deliver high quality patient care while minimizing expenses and maximizing patient satisfaction." They go on to state that "our health care systems are seriously flawed, suffering from escalating costs, variable quality, increasing bureaucracy, and lack of access" and that "maintaining the status quo is no longer an option" (p. xix).
Over the past several years, hospitals have seen growth funding level off with a marked shift of expenditures from the two largest programs (hospitals and Ontario Health Insurance Plan), to smaller programs such as community and public health, long-term care and, in particular the Ontario Drug Benefit (ODB) program. At the provincial level, Ministry of Health spending increased steadily between 1984/1985 and 1994/1995, from $8.4 billion to $17.7 billion. However, as a proportion of total health care spending, the hospital sector experienced the largest decrease (from 47% to 41%). Spending on hospitals and physicians’ services combined, represented more than three-quarters of the Ministry’s total budget. In November 1995, the Ontario provincial government announced a $1.3 billion (18%) reduction over three years in provincial transfer payments to Ontario hospitals. The 1996/97 reduction was five percent or $365 million, the 1997/98 reduction translated into just over six percent or $435 million, and the proposed 1998/99 reduction was to be close to eight percent or $507 million. The 1998/99 figure has since been deferred, but the exact details of the transfer payment have not been confirmed at the time of this writing. A statement made by the Canadian Imperial Bank of Commerce in a September 1997 report summarizing findings of their financial review of Ontario hospitals, reported that the decision of the Ministry of Health to reschedule the third year of funding cuts was a welcome relief to the hospitals in Ontario.

Hospitals who had already made significant changes in their way of doing business in order to achieve efficiencies were very concerned over their financial positions and felt that further financial cuts would seriously erode their ability to continue to provide quality
health care. The President of the Ontario Hospital Association (OHA), David MacKinnon echoed this sentiment. He issued a statement that it was the OHA's belief “that even with aggressive utilization management, savings from clinical efficiency and significant organizational consolidation, the hospital industry will not be able to achieve the 1.3 billion in funding reductions within the three year time-frame without affecting access to and quality of health care services” (MacKinnon, 1997, p. 3).

This problem was confirmed in the Canadian Imperial Bank of Commerce (September, 1997) report on the financial stability of Ontario hospitals. In this report they stated that their three-year review “of financial performance reveals a decrease in revenues, an inability to generate additional revenues to compensate for Ministry funding cuts, a widening gap between expenses and revenues, increasing operating deficits, increasing debt, and decreasing cash investments” (p. 19). The costs resulting from the restructuring initiatives added significantly to the deficit, and there is a real concern that hospitals will face a debt load that will eliminate many if not all of the financial benefits anticipated from the restructured system.

Pressures for Change in the Hospital System

In addition to reduced funding and the poor economic position of most hospitals, organizational design, process design and leadership styles were also key areas to be addressed. Health care systems in Canada had not changed substantially in their structure,
design and processes in over 50 years. As indicated, the need for hospitals to operate effectively within reduced budgets created urgency around the mandate for change. Almost overnight the common goal of most hospitals was to make fundamental changes in how their business was conducted and how services were delivered in order to cope with the new and more challenging health care environment. This required a clear vision outlining the requirements of the new organizational structures and new care delivery processes as well as new leadership styles. It also required the creation of a collective sense of responsibility within the organization and a change of organizational culture to support the new paradigms that accompany such extensive change initiatives. (Deveau & McCabe, 1996; Majchrzak & Wang, 1996; Peregrine, 1997). At a macro level the focus was on the organizational design and how the environment, technology, power and values would influence management decision making. At the micro level the focus was on how leadership styles, staff roles and responsibilities, and care delivery processes would influence professional practice and the overall quality of outcomes.

Fullan (1993) writes about change as it applies to the field of education but it is clear that many of his points are consistent with other change theories and are equally relevant to the health care setting. He points out the necessity of individuals (administration and staff) becoming skilled change agents and experts in the dynamics of change. He states that change cannot be expected to just happen, and it cannot be accomplished by playing it safe, “the goal of greater change must become explicit and its pursuit must become all out and sustained” (p. 5). Fullan identifies four core capacities
required at the individual’s level as a foundation for the creation of greater change capacity. These core capacities include personal vision building, inquiry, mastery and collaboration. He identifies that each of these core capacities at the individual level, has an organizational counterpart: shared vision-building, organizational structures, norms, and practices of inquiry; focus on organizational development and know-how, and collaborative work cultures.

**Overarching Principles**

**Total Quality Management/Continuous Quality Improvement**

It is important to point out that much of the quality terminology used in health care, while tending to sound like jargon to the outsider, is an integral part of most external review requirements. Terms referred to in this paper are terms that are well defined and are consistently utilized in hospitals and in external documents such as the Ministry of Health, Canadian Council for Health Services Accreditation, and Canada Awards of Excellence.

The demand for high quality patient care in the face of continually declining resources, coupled with the demand by provincial governments for greater efficiencies and effectiveness, resulted in health care organizations adopting an approach called Total Quality Management (TQM). While TQM is also known by other names - Continuous
Quality Improvement (CQI) or Total Quality Improvement (TQI), the literature most commonly refers to it as Total Quality Management (TQM). Edwards Deming and Joseph Juran were two quality experts whose work provided leadership in the promotion of such continuous process improvement.

The term selected for use at Scarborough General Hospital was Continuous Quality Improvement. TQM/CQI was viewed as a management philosophy that would help bring innovation to the management of health care redesign by providing an organization-wide system for the continuous improvement of processes to meet customer needs. It became a critical concept to the redesign initiatives undertaken by Scarborough General Hospital.

TQM originated as a program in the United States and was first tried successfully in the industrial sector of Japan after World War II. It represents a top down management philosophy that required a commitment to the continuous improvement of quality (Masters & Schmele, 1991) or products and services. It is important for the purposes of this discussion to recognize that one of the basic tenets of TQM was that most problems in an organization are related to structure and process, and not to employee errors. In a TQM/CQI environment, focusing on error prevention through appropriate process redesign would enable an organization to pro-actively deal with problems before they occurred and result in increased productivity, improved quality, and reduced costs.

TQM/CQI was based on a team problem solving approach where members of cross-functional teams were expected to resolve problems beyond the confines of their
regular work area. This TQM/CQI approach presupposed collaboration with the rest of the organization to work towards one goal – quality service to the customer. An organizational change strategy that integrated TQM/CQI principles (the needs of the customer and the goals and priorities of the organization) included a review of the organizational structure, facilitation of decentralized decision making, and creation of a flatter organization which would allow staff to become empowered autonomous practitioners with authority to make decisions for their area of practice (Dubnicki & Williams, 1992).

In order to discuss the TQM/CQI process as it was applied to the redesign initiative at Scarborough General Hospital, some terms and concepts require clarification. These include the terms *quality, competency, and standards; utilization management; effective; efficient; and excellence.*

*Quality, competence and standards* in clinical practice presupposes that established standards of practice exist and that performance can be measured against these standards. *Standards* are viewed as authoritative statements, they describe a common level of care or performance by which the quality of practice can be determined. Standards could be professional practice standards as defined by the various professional colleges or operational standards outlined in legislation such as the Public Hospitals Act and the Regulated Health Professions Act (RHPA). In describing *quality,* Gardner (1992) viewed it as the degree of compliance with recognized standards and the achievement of acceptable outcomes. Quality care was seen as the match between the care requirements
of the client, and the ability of the professional to meet those needs. *Competence* meant
that the care provider’s knowledge, skills and understanding of the patient was appropriate
to provide the required care and service. To be deemed competent, and for care to be
viewed as quality care, health care professionals needed to be able to meet the care
requirements of the client in whatever setting the interaction or intervention occurred.

This required qualified staff in all areas of service delivery and placed added
importance on the need for maintaining core competencies and ensuring continuous
learning through ongoing education and training. Cost containment as practiced in health
care agencies today intensifies the need to match patient or client needs with the
appropriate use of resources. Accurate matching not only optimizes the abilities of
individual practitioners and improves quality of care, but could reduce the likelihood of
ersors or misjudgments in care that could compromise the patient’s health status and
outcomes. The need for accurate matching emphasized the importance of ensuring that
staff maintained the skills necessary to provide quality patient care throughout the redesign
process.

*Utilization management* is described as a comprehensive program aimed at
achieving both cost containment and quality of care. It consists of a process whereby
actual performance is compared to established standards of care, benchmark performance
and peer data. This comparison can then be analyzed to correct identified problems or
deficiencies, in an attempt to increase the efficiency and effectiveness of services provided
Effectiveness refers to the degree to which care delivery processes are able to achieve the desired results or outcomes and efficiency refers to the degree to which care delivery processes have the desired effect with minimum effort, expense, or waste.

Excellence can be both norm referenced and criterion referenced depending on the scope of application. When norm referenced, it looks at performance at a macro level as compared against others performing the same activities and therefore contains the element of competitiveness. In this context, excellence includes the concept of benchmark performance since it relates to superiority or pre-eminence of performance and implies exceeding others in some way when delivering patient care and services. When criterion referenced, it looks at performance as compared against absolute standards that can be achieved by everyone and in this context would apply more on a micro level of personal standards of practice or internal self contained hospital activities.

Benchmarking occurs at the macro hospital or program level and requires the measurement of services and practice against recognized leaders in the field of health care and either adopting the best practice or adapting selected features to improve current practice. This becomes an important concept since many of the patient care delivery models, which will be discussed, are believed to foster excellence by stimulating increased achievement and rewarding above-average or benchmark performance.
Leadership

In a health care environment that had become increasingly complex and chaotic, it was important to recognize that most professionals needed to renew and revitalize their leadership skills. Kouzes and Posner (1987) described leaders as pioneers who ventured into unexplored territory and were able to guide their followers to new and often unfamiliar destinations. They also found that followers want leaders who were honest, competent, forward-looking and credible. Nanus (1992) characterized leaders as those who “take charge, make things happen, dream dreams and then translate them into reality” (p. 10). Regardless of the definition, there was general agreement that leaders in the change projects needed to involve the staff, gain their commitment and energize them to participate in processes to achieve mutual goals. The leadership skills and competencies required to achieve this dynamic health care environment were identified as the ability to seek out new options and approaches to resolving problems, to encourage initiatives that would optimize new opportunities for growth and change, and to cope well with complexity, ambiguity, and uncertainty.

Scarborough General Hospital agreed that the leaders required to successfully manage the change initiatives had to be visionaries and had to be able to see beyond the crushing demands of the daily business. To do this, the organization had to ensure there were committed individuals empowered with the authority to make sure that change
would happen and that projects would be followed through to successful completion. The new leaders needed to be able to motivate people to achieve ambitious goals (stretch goals) and use unconventional approaches (out of the box thinking) to achieve success.

In addition to the recognized leaders within the change projects, it was critical to ensure that the entire senior team showed a leadership role through their support and advocacy of the redesign project. Their role as a coach and facilitator could not be overemphasized. They were key to ensuring that employees were delegated the authority and were empowered enough to function as autonomous members of the change teams, able to make the decisions required of them. One of the challenges is that it is sometimes hard to motivate employees, especially many union employees, to extend themselves beyond the boundaries of their day to day job routines and move forward with the organization into unknown territory such as results from massive reorganization and job redesign. It is safe to say that in today's rapidly changing environment, leaders are challenged to use whatever charisma, power (formal or informal), and influence they have to help motivate and guide the organization forward and mark itself as a leader capable of achieving its strategic directions and vision.

Flower (1995) provides an interesting viewpoint: that the mind of the organization does not reside in the Chief Executive Officer (CEO) and the organization's top managers. It is truly an illusion that there exists an autonomous person at the center of the organization who is the leader and makes everything happen. He agrees that certainly there are people who are in charge, people whose job it is to make decisions and sign
documents, but to try to isolate who is really thinking for the organization would be a futile quest. It is the organization as a whole that does the thinking. Fullan (1993) supports this viewpoint when he states that “personal purpose is the route to organizational change” and “when personal purpose is present in numbers it provides the power for deeper change” (p. 14). He goes on to discuss that if organizations wait until top management gives leadership to the desired change process then they have missed the point.

To successfully implement models that significantly impact and transform the organization, sponsorship by visionary leaders is required. As pointed out by Flower, this leadership may come from a variety of places and may change at various stages of the redesign project. At one point it may involve sponsorship from the President and senior management levels and at another point it may mean sponsorship that flows through the various levels of the organization. This evolving dynamic leadership requires an ability to maintain both flexibility and direction. Effective leadership models strike a balance between the ability to remain focused on long-term objectives and, simultaneously, to maintain sufficient flexibility to solve day-to-day problems and recognize new opportunities. Leaders involved in the change process need to employ the core competencies that enable them to bridge the gap between short-term demands and the long-term directions of the organization.

Organizations are embodied in a set of people and in a common history that impacts their ability to evolve in certain directions. Changing from the top down works
when things are stable, but in a turbulent environment where change is widespread and constant, it often circumvents central authority. There is a sense that almost all innovations in a system happen near the front-line - so the message is to maximize this through effective leadership and by involving and empowering front-line staff. The rationale that Flower (1995) uses to support this point of view is “the nature of an innovation is that it will arise at the fringe where it can afford to become prevalent enough to establish its usefulness without being overwhelmed by the inertia of the orthodox system” (p.36). This implies that if appropriate leadership is provided, and if innovations or change initiatives are given the time and opportunity to grow, be applied, get established and succeed in the front-lines, these new initiatives will then move back into the center of the mainstream system.

It is important therefore, once a vision has been established and a course of action set, to manage the change by using a bottom-up approach rather than trying to institute it from the top down. This requires time, commitment, and dedication from the key leaders involved in the change process, but it is more apt to result in sustainable change that is acceptable to major stakeholders (Belasco & Stayer, 1993, Flower, 1995; Isenberg, 1987). Fullan (1993) points out that “people must behave their way into new ideas and skills, not just think their way into them” (p. 15). For mastery and competence to be effective there has to be a development of new mindsets and a learning habit that penetrates everything the organization does. He states that “personal mastery and group mastery feed on each
other in learning organizations. People need one another to learn and to accomplish things” (p. 17).

When a system is in turbulence, the turbulence is not just in the environment; it is part of the organization as well, and just because a future scenario is plausible doesn’t mean it is achievable by the organization (Flower, 1995). The process for achieving change may be clear and the dynamics plausible, but in some cases the actual course of action may be too hard and the costs too high for the organization to handle. Another issue to consider is Fullan’s (1993) ‘add-onitis’ or ‘projectitis’ that he describes as occurring “where the latest interesting innovation is taken on without either a careful assessment of its strengths and weaknesses, or of how or whether it can be integrated with what is already going on” (p. 51).

It is important for leaders to accept the fact that poorly planned attempts at change actually decrease commitment and often make the situation worse. Fullan (1997) states that “the starting point for thinking about and conducting leadership for change is to be deeply and explicitly aware that there is no “silver bullet” or set of techniques that can do the job”. He points out there are no shortcuts and “leaders for change must immerse themselves in real situations and begin to craft their own theories of change, constantly testing them against new situations and the accounts of others’ experience” (p. 9). Sometimes organizations go through an adaptation that is not useful to the overall achievement of the desired change or redesign initiative. In this case, there is a need for strong leaders to help the organization let go, move on and regain a sense of direction. If
the leader does not have the ability to recognize a mistake, or a failed initiative, and make
the necessary decisions to address the problem significant time, energy and resources are
wasted. Staff often become discouraged and resistance grows towards the project in
question creating a no-win situation.

Another step in the process of ensuring effective leadership involved examining the
concept of empowerment as a method of capitalizing on the skills and abilities of the
organization's employees. Conger and Kanungo (1988) defined empowerment as a
"process of enhancing feelings of self-efficacy among organizational members through
identification of conditions that foster powerlessness and through their removal by both
formal organizational practices and informal techniques of providing efficacy
information"(p. 473). They report that in contrast to employees in authoritarian systems,
empowered employees develop "can do" attitudes that positively affect their competence
and their ability to be innovative which leads to positive work outcomes.

The literature implies that empowered employees are one of the principal
components of effective organizations and that the ability to be productive grows when
power and control are shared with employees through strategies such as group
development and team building (Edwards, Farrough, Gardner, & Harrison, 1994; Porter-
O'Grady, 1994; Boston, & Vestal, 1994). At Scarborough General Hospital, the process
to empower employees would have to involve the delegation of authority and decision
making to staff members. This empowerment and delegation of authority was necessary so
that staff would be able to effectively participate in the change strategies, be able to solve
problems, streamline processes, question the value of processes, and identify ways to improve or eliminate redundant steps or processes.

**Strategic Planning**

It can be argued that one of the most challenging roles for leaders in today's environment is to chart a long-term strategic course and provide a vision that helps keep the organization moving in that strategic direction over a prolonged period of time. Appropriate strategic planning (that includes elements of strategic fit, strategic intent, and strategic opportunism) is a way of mapping out the course and achieving the vision for the change process. An important concept is how strategic planning that includes clear leadership and vision help organize the multiple change initiatives by providing recognizable themes whose various threads form a pattern that can be related to the overall strategic process and the outcomes achieved. Staff need to be able to understand the context within which change is occurring and how the various change components are linked. There are some that would argue that there is no role for strategic planning and that it is a phenomenon of past thinking and practice. One of the more vocal opponents of strategic planning is Mintzberg (1994) who argues that "the actual process of planning itself breeds a basic inflexibility and therefore a resistance to significant change". He goes on to state that "planning is fundamentally a conservative process and acts to maintain the basic orientation of the organization" (p. 303).
Others would argue that in today’s environment, competitive revitalization of hospitals implies a need for strategic planning. A need to rethink many of the basic concepts or strategies for delivering health care services and the need to stretch the goal or aim beyond what is immediately apparent given current resources and capabilities. Hamel and Prahalad (1989) challenge organizations to ask “how influential our organization is in setting new rules of competition, does it regularly define new ways of doing business, and is it active in setting new standards? Is it a rule maker or a rule breaker and is it more interested in challenging the status quo than in protecting it” (p. 1)? This is a similar question to the one posed by Grace McGartland (1996) when she asks if organizations have the courage to walk the tightrope, allow the free flow of imagination and energy and explore what she terms the conversation of possibilities.

This challenging of the status-quo encourages organizations to use “out-of-the-box” thinking, where the box refers to a pen-and-paper puzzle which requires individuals to break free from the imaginary boundaries of the box in order to see the problem from a fresh perspective. The process requires taking what is already known and combining it with the unknown in order to create a new idea and new solution. Many agree that there is a growing need to utilize this out-of-the-box metaphor to encourage successful creative thinking within organizations in order to find new solutions to old problems.

Strategic intent implies a competitive focus and the concept of winning, it is stable over time and provides a consistency to short-term actions by setting targets while still allowing flexibility as new opportunities emerge (Belasco & Stayer, 1993; Hamel &
Prahalad, 1989). Strategic intent requires an organization to stretch beyond current boundaries, to reach beyond current resources and capabilities and identify a significant gap or misfit between its resources and its ambitions. It then pushes the organization to close the gap by building new advantages and to do this by clearly staging each progressive step of the change initiative. Strategic intent requires developing a competitive focus at all levels of the organization, providing employees with the skills they need to work effectively, allowing the organization to complete one challenge before undertaking the next one and establishing clear milestones and review mechanisms to track progress (Hamel & Prahalad, 1989). At the micro level, strategic intent can be criterion referenced (decrease internal comparative cost per case by 2%) but at the macro level of overall hospital performance (achieve the lowest cost per case in peer group) it becomes norm referenced.

While the strategic intent model emphasizes the need to accelerate organizational learning to outpace competitors in achieving new advantages, the strategic fit model emphasizes the search for advantages that are geared to fit current resources. The strategic fit model looks for advantages that are inherently sustainable, are low risk and conform to current financial objectives. Hamel and Prahalad (1989) point out that both models recognize the problem of competing in a hostile environment with limited resources, but while strategic fit centers on the problem of trimming ambitions to match available resources, the emphasis in strategic intent is on reaching seemingly unattainable goals.
In health care restructuring, both models are appropriate and both have been applied but the big winners appear to be those organizations that had the courage to utilize a strategic intent strategy. Trimming ambitions to fit current resources (strategic fit) does not appear to result in the ability to achieve the dramatic changes required in the short time frames available. Restructuring and funding decisions are made based on comparative data: efficiency, cost effectiveness, market share, and quality. Hospitals are big business and whether they like it or not they are in a very competitive environment. Often it is the organization that is first off the mark, the one that captures attention, that gets the funding for a new program or is favoured with the distinction of being a regional program. This ability to stand out or be perceived as a leader requires flexibility and courage to be innovative and create new solutions to old problems. An example of how strategic intent works involves hospitals (such as Scarborough General Hospital) who led the way in achieving dramatic decreases in their length of stay for patients by using new technology to support change in practice. By investing proactively in new equipment and training to support new procedures such as laproscopic surgery it was possible to change a six to ten day length of stay for a gallbladder patient into a twenty-four hour stay. This not only conserved significant patient days but also allowed increased volumes to be accommodated with fewer beds. It did however require significant capital investment to achieve the end result and efficiencies.

Another way of viewing strategic planning and its role in hospital redesign is to use Kearns’ (1996) description of strategic planning as a process for achieving various fits.
The various “fits” that Kearns describes are the fit between an organization and its external environment that occurs when an organization identifies its internal strengths, abilities, and resources that allow it to take advantage of existing or emerging opportunities. A second fit is achieved when decision makers understand the relationship between the internal organizational strengths and the external threats or challenges as they compare to the organization’s ability to utilize their strengths to eliminate or at least minimize the negative impacts of the threats. A third fit is achieved when decision makers understand exactly how the organization’s weaknesses are holding it back and preventing it from achieving its strategic objectives. Decisions based on this information can then be made to address the concerns - decisions such as eliminating certain programs and services, adding resources to strengthen weaker programs, redesigning care delivery processes and forming partnerships with other organizations. The fourth and last fit is a type of damage control which occurs when an organization realizes it is very vulnerable to external threats and puts strategies in place to better position itself and minimize the threat to its ability to achieve its objectives. Kearns warns that all major decisions are evaluated in light of their strategic implications and involve an organizational commitment to a set of values, operating philosophies, and priorities.

Isenberg (1987) in several studies involving senior executives and managers identified what he terms strategic opportunism. He describes this as “the ability to remain focused on long-term objectives while staying flexible enough to solve day-to-day problems and recognize new opportunities” (p. 92). Isenberg summarizes by stating that
"thinking both strategically and opportunistically is clearly not easy. It requires leaders with a tolerance for ambiguity, intellectual intensity, mental hustle, and a vigilant eye for new ideas" (p. 97). He goes on to state that there is nothing undisciplined about strategic opportunism and that "it requires much intellectual courage to be open to new possibilities and to engage in reflective inquiry rather than rationalization" (p. 97). This implies that management teams must realize that failing to think strategically would have a cost, but maintaining a strategic direction that is so rigid it precludes certain opportunities acts as a constraint and is also costly. This requires a commitment that organizations must stay receptive to new information and opportunities, and capitalize on those opportunities that mesh with current organizational needs. Through this process there is a greater possibility of achieving the organization's vision and strategic goals. Successful change relies on the ability of senior management as leaders to understand the full impact of change. It requires an understanding of the urgency it creates to redesign the current structures in order to pursue growth and new business development with as much energy as was formerly invested in pursuing operational efficiency and downsizing (Hamel 1994; Kotter 1995; Belasco & Stayer 1993).

Fullan (1993) concluded that change processes are non-linear and chaotic and that successful leaders are those leaders who are able to use to their advantage periodic patterns that occur over time. He identified what he described as "the eight lessons of the paradigm of change" which are "laced with dilemmas that require leaders to work with opposing tendencies by bringing them into dynamic tension" (p. 14). These concepts are
quite different in many respects to other theorists. Concepts included in these eight basic lessons were (Fullan, 1993, p. 21-41):

**Lesson One:** You can’t mandate what matters. The more complex the change the less you can force it. While policies, standards, and monitoring of performance are important activities what really matter in complex change are skills, creative thinking, and commitment to action. You cannot mandate changes that require skills, capacity, commitment, motivation, beliefs and insight, and discretionary judgement to implement them. You cannot force people to think differently or compel them to develop new skills.

**Lesson Two:** Change is a journey not a blueprint. Change is non-linear, loaded with uncertainty and excitement and sometimes perverse. Most change involves multiple innovations that are implemented simultaneously, are multifaceted, and complex. Change involves a journey into the unknown where the solution or end is not known in advance – the route and the destination must be discovered through the journey itself.

**Lesson Three:** Problems are our friends. Problems are inevitable and you can’t learn or be successful without them. Problems are necessary for learning, and inquiry is critical to learning, but inquiry must be focused to ensure that learning the right lessons is achieved. Problem avoidance is the real enemy of achieving productive change, a spirit of openness and inquiry is essential to solving problems.

**Lesson Four:** Vision and strategic planning come later. Premature visions and planning blind are two common faults in many change initiatives. Reflective experience is necessary before one can form a plausible vision since vision emerges from action more than it
precedes action. Shared vision is critical for the learning organization because it provides the focus and energy for learning. Shared vision must evolve through the joint interactions of organizational members and leaders otherwise it is just one person’s or one group’s vision imposed on the organization. As people talk, try things out, inquire, re-try, they become more skilled, ideas become clearer, and shared commitment gets stronger.

Lesson Five: Individualism and collectivism must have equal power. There are no one-sided solutions to isolation and group thinking. Professional isolation can limit access to new ideas and better solutions. Isolation promotes conservatism, resistance to innovation, and limitations to inquiry and learning. On the other hand groups must guard against faddism more than individuals and in times of dynamic complexity groups must recognize that different points of view often anticipate new problems earlier. A balance must be achieved since isolation is bad but group dominance may be worse.

Lesson Six: Neither centralization nor decentralization works. Both top-down and bottom-up strategies are necessary – change works when there is consensus above and pressure below. The issue is to prevent over-control of centralization and the potential chaos of decentralization.

Lesson Seven: Connection with the wider environment is critical for success. The best organizations learn externally as well as internally and link their internal change strategies to the external environmental drivers.

Lesson Eight: Every person is a change agent. Change is too important to leave to the experts, personal mind set and mastery is the ultimate protection. It is safe to say that one
individual alone cannot understand the complexities of change and the conditions of change cannot be established by the formal leaders working in isolation. Everyone has the responsibility to create an organization capable of individual and collective inquiry and continuous renewal. It is only by individuals taking action to change their personal environment that there is any hope for sustainable change.

**Education and Training**

One of the primary objectives of an organizational change initiative is the enhancement of the organization’s performance with mutual gains for both the organization and the employees. Fullan (1993) feels “the solution lies in better ways of thinking about, and dealing with, inherently unpredictable processes” (p. 19). He states that “we need mechanisms to question and update our mental maps on a continuous basis” (p. 15). He also states that it is not enough to be exposed to new ideas, staff must know where these new ideas fit and how they can become skilled in them. Organizations who are engaged in the process of implementing massive changes must give priority to ensuring effective ongoing education for staff. Staff must be supported in acquiring the new skills necessary to participate effectively in teams, to become empowered and to function effectively in a redesigned environment. A key component to achieving this objective is to ensure that professional, clinical, and administrative standards are
maintained. Appropriate education ensures that staff acquire the necessary skills, remain committed to the change initiative, and understand its benefits.

In order to support the hospital’s many change initiatives with effective educational programs it is helpful for the organization to understand various learning requirements and learning styles of adults. This is essential to achieving educational programs which result in staff learning the knowledge required to support their new roles, responsibilities and processes in as timely and cost effective manner as possible. Much research has been done in the area of how adults learn but often this knowledge is not reflected in the educational programs being developed by hospitals. In a hospital setting the need for programs that are streamlined, low cost, and easy to deliver often eliminates much of the flexibility required to cater to the variety of learning styles of a very diverse group of employees. The challenge for most organizations, is how to design and deliver effective educational programs that meet the learning outcomes to achieve the desired change: programs that are cost effective yet flexible enough to recognize and accommodate the various learning styles of a wide range of employees. Hospitals can use adult learning models to facilitate and support the implementation of successful change initiatives.

Brookfield (1986) tells us that “the facilitation of learning - assisting adults to make sense of and act upon personal, social, occupational, and political environments in which they live - is an important, exhilarating and profound activity both for the facilitators and for learners” (p. vii). This is a situation that is difficult for health care
organizations to achieve, especially when dealing with unionized employees who view the process of growth and change (especially within their work environment) as something to be feared and challenged rather than something to look forward to and enjoy.

Organizations must strive to understand and apply adult education theories and models when creating the change vision and designing the teams to achieve that vision. By applying these theories when designing and delivering educational programs, the hospital has a greater opportunity to achieve the desired learning outcomes. By knowing individual learning styles, and therefore individual strengths and weaknesses, the organization should be able to achieve the desired outcomes through effective use of each skill set in the appropriate situation - balancing the thinkers, the doers, the visionaries and the risk takers with the tasks to be accomplished. For most of our adult lives we continually learn by experiencing our environment and then creating meaning from these experiences.

As already stated, hospitals undergoing extensive change are challenged with providing effective educational programs to support their change initiatives. To do this effectively it is helpful for them to understand the experiential learning process as represented by Kolb (1984). According to Kolb’s theory, people fall into one of four different models of learning: concrete experience which focuses on being involved with new experiences, reflective observation which focuses on observing others and emphasizes understanding as opposed to practical application, abstract conceptualization which focuses on logic, ideas and concepts, and active experimentation which focuses on practical application as opposed to reflective understanding.
Kolb explains that learners pass through all four stages as they grow and develop and that they gradually come to prefer and rely on one of the four different forms of knowing - convergence, divergence, assimilation, or accommodation. Convergers are those learners who rely mainly on abstract conceptualization and active experimentation. They start with an idea and then need to try it out for themselves to see if it works. These individuals like to come quickly to a concrete solution and tend to lose interest or think the process isn’t working if it takes too long to achieve results. They tend to be problem solvers since they are good at taking in information abstractly and then processing it actively. Divergers have the opposite strengths to convergers since they rely on concrete experience and reflective observation. They start with what they see, like to explore all possibilities and tend to be imaginative and aware of meanings and values. They tend to be good in situations where there are many ideas that need to be organized into a meaningful whole and where alternative ideas and suggestions are required. Assimilators take in or experience information abstractly and process it reflectively: they are thinkers and observers who start with an idea, reflect on it and then watch it take on different shapes. They learn best by reading, listening, observing, and reflecting on information and tend to be good at inductive reasoning and the construction of theoretical models. The last group of learners are the accommodators, who take in information concretely and then process it actively. They are the doers, they get things done by getting involved in new experiences, taking advantage of opportunities and they are not afraid of taking risks. They adapt well
to a changing environment and are able to discard theories and plans and take a trial and error approach to problem solving. (Brookfield, 1987; Cranton, 1992; Kolb, 1984).

Scarborough General Hospital’s change project involved a vast array of individuals ranging from housekeeping employees through to physician specialists. Recognizing that each group represents a different agenda required a strategy to accommodate individual needs in order to ensure successful implementation of the various change strategies. This diversity required an understanding of the dynamics and potential impact of various personality or psychological types. It required an understanding of their influence not only on learning styles but also on the manner in which individuals would interact with each other in various settings such as the workplace and in the classroom or meeting room.

The use of tools to assess personality type made it easier to understand individual preferences. The best known of these tools is the Myers-Briggs Type Inventory that is based on the work of Jung. “This tool reports individual preferences on four scales with each scale representing two opposite preferences” (Briggs Myers, 1991, p. 4). It helps identify where people like to focus their attention, the way they like to make decisions, and the kind of lifestyle they adopt. According to Jung’s theory of psychological types there are four pairs of dialectically opposed adaptive orientations (Kolb, 1984, p. 79). The first is mode of relation to the world - where individuals get their energy from - from outside (extroversion) or from within (introversion). The second is mode of decision making - whether the individual prefers to be decisive and well-planned (judgment) or flexible and spontaneous (perception). The third adaptive orientation is preferred way of
perceiving, which refers to how individuals gather information about their world - in a literal, sequential way (sensing) or in a more figurative, random way (intuition). The fourth orientation is preferred way of judging, meaning whether individuals are objective and impersonal (thinking), or subjective and use other people (feeling).

By recognizing these differences, and being able to recognize individuals with specific strengths, the organization is better able to match skills and interests with the tasks to be accomplished. It also addresses the matter of how to present information effectively to various groups. Groups ranging from the board of directors and the senior team, to physicians and professional staff, and to the unions. The challenge is to present to each group in a manner which allows them to identify with the information being presented, understand the overall implications and benefits of the changes being proposed and be able to make the informed decisions required of them.

Another powerful influence on how individuals learn is brain hemisphere preference. Brain hemisphere preference or specialization, plays a role in how information is received and processed, how we interact with one another, and how we react to the world around us. Left brain individuals move from one point to another in a step-by-step manner and tend to be analytical since the left brain hemisphere specializes in linear and sequential processing. Right brain individuals on the other hand, specialize in a global type of processing or a combining of the parts to create a whole. They engage in synthesis or the construction of patterns and are therefore better able to recognize the relationships that exist among the various parts (Williams, 1983).
The assumptions for adult learners as described by Knowles (1984) and Brookfield (1986) plus theories regarding personality types and brain hemisphere can be used as triggers for teacher-learner transactions, curriculum development and instructional design to achieve the desired learning outcomes required to achieve process redesign within the organization. In addition, Knowles describes staff's need to know as being crucial to learning outcomes, since they need to know why they are required to attend workshops and training sessions before they will expend the energy and commitment required to learn the material. They also need to understand the personal benefits of acquiring this new knowledge and how they will be able to use it and make it relevant. This is especially important to groups whose job functions are significantly impacted by organizational and process changes. These employees have high anxiety levels over their future with the organization, their ability to cope with new job demands and the possibility that they may be displacing co-workers through the retraining and job redeployment process. Adults engage in learning as a result of their own choice to do so and not as a result of being coerced, bullied or intimidated. They must choose to develop new skills, acquire new knowledge, and improve current competencies. This choice to learn ties in with Brookfield’s voluntary participation in learning and can be promoted through the use of participatory learning methods which encourage active involvement and result in increased critical thinking and assimilation of the new knowledge on the part of the staff.

Knowles’ also assumes that people have a need to be self-directed in their learning and challenges the organization to find ways of engaging the staff in a process of mutual
inquiry and involving them in the change process. This assumption relates to Brookfield's mutual respect and collaborative spirit, which recognizes individuals and the importance of staff involvement and active participation. Mutual respect requires that critical reflection, discussion and exploration of alternative ways of thinking must be managed in a constructive way which allows underlying assumptions to be probed and challenged but in a non-threatening way that supports staff in achieving new understanding.

Knowles' other assumptions regarding acknowledging the learner's accumulated experience, recognizing the individual's readiness to learn, and assisting the adult learner to apply the knowledge and principles to his or her real work environment are perhaps the most challenging to address. As stated, Scarborough General Hospital has always had a very diverse work force in terms of age, levels of education, language abilities, culture and levels of motivation. To develop programs that accommodated the learning styles of individuals was not only very difficult, but also costly and time-intensive. Since most programs needed to be designed and implemented as efficiently as possible, there was limited opportunity to meet the variety of learning needs of such a large and diverse staff. Brookfield's action and reflection (associated with the term "praxis") was useful since it engages the learner and the educator in an alternating and continuous process of exploration, action, and reflection. It also develops a critical discussion that pays attention to the problems experienced by the staff at the level of their everyday environment. At this point educators had the opportunity to use forms of pedagogy that treated staff as critical agents, and made new learning meaningful and ultimately liberating.
Scarborough General Hospital’s approach to providing training programs to achieve the change initiatives reflected Dewey’s aim of education that was to help learners gain conscious direction and control of the learning process. Although Dewey’s work was done some time ago, it remains very relevant and applicable. Dewey’s (1966) learning by doing approach was applied to the multi-skilling project that created the new patient service associate role (PSA). It was felt that theory without practice would make it more difficult for staff to understand and apply their new skills and would not allow the desired reflection to occur. Dewey’s experiential learning was an example of how to make concrete the actual experience of acquiring theoretical knowledge, thereby allowing individuals to achieve some control over their learning process.

As indicated, this was the basis for the strategy to make the organization’s change theories and processes meaningful to the front line staff in a non-threatening way. It provided appropriate educational programs so that they could learn and apply the new knowledge to their own work processes in a timely manner (Kolb, 1984). Classes structured around seminar and experiential learning approaches, with environments that encouraged exploration and creativity in learning, go a long way towards supporting the various learning styles of such a diverse staff. A problem-based learning strategy using individual reflection (through the use of daily diaries and portfolios) and group discussions helped staff to think through what they wanted and needed to learn and to identify their preferred learning strategies. Even though this was a more humanistic approach (sensitive to the individual needs of staff) to providing the education required to support the
organizational change, it was also an approach that required more commitment, time, and energy to deliver. By using the Myers-Briggs typology and through recognition of strengths and areas in which growth was required, staff and educators were able to work together to achieve the desired learning outcomes. In summary, successful change depended upon the staff’s willingness and ability to embrace and support change and this came through educational programs that recognized various learning styles, promoted knowledge and understanding and facilitated appropriate application of new learning.

An integral component of educational strategies is the concept of organizational or core competencies. These core competencies have been defined as the skills, knowledge, attitudes or values that make up the culture and philosophy of the organization and they require sponsors or leaders to role-model and ensure employees achieve and demonstrate them. Kapel (1992) suggests that in today’s environment, employees are hired for their clinical skills but they are fired for lack of organizational competencies, examples of which would be their inability to communicate effectively, work in teams, and take individual responsibility for decision-making. The question for the organization becomes - what is driving the change improvement and transformation agenda? Is the goal to simply maintain the current business status or is the organization attempting to create a new vision of tomorrow? Regardless of the answer, the need to adequately prepared staff for the change and ensure they have the appropriate competencies necessary to allow them to be successful requires that this concept be addressed through education and training resources.
The organization must ask what new organizational or core competencies are essential to achieve its desired future state and what strategies are being employed to ensure these core competencies exist? A common metaphor used to describe core competencies is to think of the organization as a large tree. The trunk and major limbs are core services, the smaller branches are service units or departments; the leaves, flowers, and fruits are end results or services. It is the root system that provides nourishment, sustenance, and stability - that is the core competence. Another way of looking at core competence is to view it as collective learning in an organization, something which is enhanced as it is applied and shared. It becomes a shared system of values, beliefs and knowledge which sets the organization apart, makes it unique, and supports the achievement of its vision and strategic directions. It is said that leaders of the 1990's will be judged on their ability to identify, cultivate and even exploit the core competencies that make growth and change possible within their organizations (Prahalad & Hamel 1990; Belasco & Stayer 1993). Core competencies should be defined individually by each organization since they will differ depending upon the culture and the core business functions.

It is safe to say that current capabilities/competencies and resources will not suffice to meet the new challenges - organizations must systematically build new advantages in order to close the gap between existing resources and current opportunities (Hamel & Prahalad 1989; Belasco & Stayer 1993). This requires clearly identifying the focus for employee efforts (where the energy and resources will be spent), defining the anticipated
outcomes, and that the organization does this while still remaining flexible about the means to achieve these outcomes. Individuals and teams throughout the organization must understand and see the implications for their own jobs since the most significant savings and quality outcomes come from better working methods invented by employees (Belasco & Stayer 1993; Prahalad & Hamel 1990).

Organizational competencies have become especially important within the health care sector since the Health Services Restructuring Commission’s directives have clearly indicated that it is no longer possible to restrict oneself to the bricks and mortar of the individual organization. Hospitals can no longer function as discrete autonomous entities. They must work in partnerships, alliances and shared service ventures and learn to function beyond the physical confines of their individual organizations. There is increasing demand for wider integration of health care delivery systems and virtual communication systems - systems that are holistic, comprehensive, easily accessed, affordable and last but not least of high quality that meet professional practice standards and customer demands (HSRC, July Metro Report 1997; OHA, IDS Vision 1997). As already discussed, this places increasing demands on health care professionals to not only have the critical skills necessary to do their job but also to have the overall organizational competencies required to achieve the organization’s future vision.
Organizational Support Systems

Like the "product" of most organizations, the quality of care provided in hospitals is dependent upon the people who work within the system. Their knowledge, clinical skills and commitment to patient care are vital to ensuring organizational and process redesign is accomplished in a way that continues to be in the best interest of all the key players: health care providers; patients and families; and fundors of health care services. Support systems required to ensure effective change include adequate resources to successfully accomplish the change initiatives, adequate time to allow training and learning to occur, and ongoing leadership and commitment from senior management.

Change theory stress that there must be a clear mandate for workplace adjustments and redeployment to be handled openly and fairly. There needs to be an equitable set of rules to guide the process and that systems must be in place to ensure qualified staff are retained to provide appropriate services. Hospital restructuring involves every single employee and the overall impact on human resources is enormous. The need for fairness in implementing the change and any resulting redeployment processes, as well as the need for adequate support systems for the staff impacted by the many changes cannot be overstated.
Organizational Structure and Patient Care Delivery Models

Having completed some discussion of the overarching components of change, the next review component involved the process of determining which organizational structure and care delivery models would be the most appropriate and advantageous for achieving Scarborough General Hospital’s desired outcomes. As stated earlier, the Health Services Restructuring Commission’s directives, the decreased funding, and consumer awareness and increased demands for quality health care emphasized the need for aggressive examination of alternative models of organizational structure and care delivery processes.

The review of available models revealed a wide variety to choose from, each with its individual strengths and weaknesses, and many with overlapping characteristics. In reviewing the literature, one of the limitations was that most of the experiences described originate from the United States. Although there is much that can be learned from American experiences, there is also a need for caution when transporting these models, since the different funding and reimbursement systems can have significant impact on the application of these structures or processes within a Canadian health care environment. Another issue identified from the literature was that many of the experiences described occurred in a small number of institutions or facilities that were still in the planning or early implementation stages at the time of reporting. This resulted in a lack of reporting on fully completed projects - projects that spanned the planning and initiation phase through
to the implementation and evaluation phase and could link outcomes to specific change strategies. As well, there was little description of failures and pitfalls associated with specific models.

In reviewing organizational redesign, it was apparent that it had become a proliferation of metaphors and methods. The review indicated that approaches to redesign could be grouped into basically three categories. *Restructuring* (organizational unit solutions), which is usually concerned only with stakeholder well being and includes downsizing, rightsizing and de-layering, and typically involves manipulating units currently represented by the organizational chart. *Re-engineering* (organizational process solutions), which addresses the needs of both shareholders and customers through process management, process innovation and process redesign. *Rethinking* (organizational cognition) which responds to the claims of shareholders, customers, and employees by examining the way in which organizational issues and decisions are patterned. Kearns (1996) states that rethinking offers the best solution as a long-term methodology because "it clarifies organizational complexity as a balance of hierarchical control, individual autonomy, and spontaneous cooperation" (p. 12). With the many redesign strategies that are currently in vogue it is not surprising that organizations are confused and concerned about what is the best approach to achieve success for their particular area.
Review of Organizational Structures

Review of organizational structures includes review of methods to flatten the structure, decentralize decision making and authority, and ensure that job processes and committees are restructured with specific mandates to set standards and ensure that quality services are provided by competent staff. Criteria for selection of an appropriate organizational model included the ability of the new structure to support increased demands for cost-effective, quality health care to meet identified patient needs. It also included the ability to be responsive to the changing patterns of health care and the ability to support the required work redesign (see Figure 2).

Organizational Structures

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<th>Organizational Models Reviewed</th>
<th>Criteria for Selection of Organizational Model</th>
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<td>* Shared governance</td>
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<td>* Service or product line</td>
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<td>* ability to support work redesign</td>
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Figure 2. Excerpt from Figure 1 – Represents the framework for review and discussion of the literature on organizational structures.

Organizational models in health care traditionally put departments in a well-defined and unwieldy chain of command. This traditional/functional/bureaucratic structure was inflexible, multi-tiered and hierarchical and reflected differences in power and authority. This type of structure originated around the turn of the century when modern hospitals
were first organized and bureaucracies were highly valued. In many organizations (including hospitals), hierarchical dependency produced task-focused conformists who were good at following orders. It also resulted in a philosophy that placed the focus on short-term task performance rather than long-term effectiveness. This structure tended to limit individual creativity and did not fully utilize individual potential (Manz and Sims 1989, p. 142). In today's environment that is mandating hospital restructuring and new care delivery processes, theorists have stressed the necessities of flattening the hierarchy, working with employees as partners, and creating empowered autonomous work units or teams.

Kofman and Senge (1993) write that "many organizations are trying to move themselves away from stovepipe (vertically oriented) structures and more into horizontal business processes that eliminate traditional functions and power hierarchies" (p. 17). They report that the ability of organizations to succeed in many of their redesign initiatives is limited by the fact that "the walls that exist in the physical world are reflections of our mental walls, the separation between the different functions is just not geographic, it lives in the way we think" (p. 17). This important concept requires recognition that the mental models of the organization must change as well as the physical structures if the organizational change is to be sustainable.

Majchrzak and Wang (1996) write that many organizations have done away with functional silos or vertical structures and have created new organizational structures that focus on process-complete departments, each potentially able to perform all of the cross-
functional steps necessary to complete a service requirement. What is interesting in their findings is that in many cases these new organizational structures failed to measure up, resulted in disappointment, and were unable to achieve the desired outcomes. Companies found that after going through the trauma of re-engineering, their performance was the same, no better, and in some cases worse than it was before they started the process. What Majchrzak and Wang identified as a leading cause of this failure was the tendency of managers and re-engineering teams to underestimate the actions required to transform the way employees think, behave, and work with one another. There was an assumption that simply changing the organizational structure would cause employees to shed their former mind-sets and would unite them instantly into a team intent on achieving common goals.

The difficulty of changing mind-sets (Kofman & Senge, 1993) is often not fully recognized. Where enormous amounts of money are spent defining which tasks units should perform and which people should be assigned to those units much less thought and energy is spent restructuring the incentive systems, reconfiguring the work space, or redesigning jobs and procedures to encourage team collaboration and collective responsibility. They conclude that if companies and organizations are not ready to take the steps required to change their culture, they may be better off leaving their functional departments intact. Majchrzak and Wang (1996) caution that “coordination among functions can be greatly improved without reorganizing around complete processes and that companies can reap greater benefits by strengthening the ties among their functions than by creating process-complete departments that lack a collaborative culture” (p. 95).
Keidel (1994) supports the above stated themes, when he indicates that organizational rethinking means conceptualizing the design in a manner that recognizes and includes the organization's identity and character as well as the organization’s capabilities.

Many hospitals are moving towards organizational models that emphasize decentralization and programmatic structures and require a new brand of leadership, new competencies and skills for staff at all levels of the organization. There is a new organizational environment emerging, one that expects affiliation, co-operation, process-versus-task focus, and a networking-versus-hierarchy approach with an emphasis on human relations. Some current models of organizational restructuring include, as a central philosophy, the concept of patient-focused care. Selecting one model over another is a process of identifying beliefs about people (patients, families, and health care professionals), about work (autonomy, responsibility, decision making, and expertise), about relationships (hierarchical, collegial), and about professional practice. The selection of an organizational model is one instance where the process is as important as the outcome.

**Traditional/Functional**

Until very recently, the traditional or functional administrative structure characterized most health care organizations, including Scarborough General Hospital, and still exists in many facilities today. This model resembled a pyramid with power, authority and chain of command resting at the top and decreasing down through the
layers. In this model, communications were also filtered through the layers of the pyramid structure and traveled in both directions (Charns & Smith Tewksbury, 1993).

Organization is usually by departments or functional areas and management has complete control and authority within each department with decision making being attributed to one key individual (usually the department director) who makes the decisions regarding various departmental activities including budget planning, resource allocations, and human resources management.

The benefits of this traditional/functional structure are that responsibility for decision making is clearly delineated, communication channels are simplified if not always effective, and resources are pooled and shared within each department, permitting cost containment. The departmental management has the responsibility and authority to ensure that the professional standards of their members are adhered to, and that all members of a profession (nursing, physio-therapy etc.) are located within one department. The department then acts as an advocate for the profession or function it represents (Toppling, 1993; Charns & Smith Tewksbury, 1993).

Even though the traditional/functional model is simple and easy to understand, it does present limitations and challenges. Communication is one area of concern since it is often impeded by the fact that information must be filtered in both directions through multiple layers of the organization which impacts on its timeliness and accuracy. Another concern around communication is the development of turf or territorial boundaries that arise around job functions or departments in response to the structural definition or types
of activities performed by individual staff members. These turf barriers may limit not only the type of communication between departments and individual professionals, but also the quality of the information shared (Toppling, 1993; Charns & Smith Tewksbury, 1993).

At Scarborough General Hospital, the focus on individual departments or processes actually inhibited many interdisciplinary and interdepartmental collaborative initiatives especially around the sharing of resources, joint planning and capital acquisition. Each area functioned independently and was not able to achieve a more global perspective around shared initiatives. An additional concern with this model was that, contrary to the customer service focus which was characteristic of the Continuous Quality Improvement (CQI) philosophy of Scarborough General Hospital, the ultimate customer, the patient, resided at the bottom of the hierarchy. Consequently services were delivered in a manner that better met the needs of the care providers than the needs of the patient.

**Shared Governance (collaborative governance)**

The next organizational model examined was the shared governance model, also referred to as a collaborative governance model. In this model, responsibility and accountability for operations, policy, and quality of clinical care are delegated to all members of the health care team. Shared governance, which was inspired by the principles of empowerment, appears to be an innovative, contemporary model for professionals and is a model that requires changes in the role, responsibilities, and authority of administrators, managers, and professionals.
Although the literature describes several models of shared governance, the council model is the most widely implemented within health care. It is based on a series of councils composed of management and staff who collaborate to facilitate decision-making for the whole system as well as determine policy and practice, quality standards, and education. The council structure usually consists of a policy council that is used to provide better linkage between policy, operations and service provision. The policy council is composed of front-line service personnel, management and board members. Another type of council is the operations council that focuses on the management of human resources, fiscal, material and support systems resources and has representatives from all managerial areas. And finally, a patient care council that focuses on issues related to clinical service delivery and has representatives that include clinical professionals and specialists. These councils or committees have final authority in the decision making process and often, in addition to the regular council members, patients or customers are invited to participate in this process (Edwards, Farrough, Gardner, & Harrison, 1994; Porter-O’Grady, 1994).

Because shared governance models are driven by an emphasis on Total Quality Management or Continuous Quality Improvement, they provide a framework for addressing professional practice and quality of care issues (external to traditional management structures). They attempt to create an integrated seamless collaborative structure that fosters partnerships with all of the disciplines. The leadership style required is highly participative since this model promotes empowerment of the front line staff through participation with management in decisions affecting policy, operations and
patient care. In this model the traditional managerial role changes from leading, organizing and planning to facilitating, coordinating and integrating (Belasco & Stayer, 1993; Edwards, Farrough, Gardner, & Harrison, 1994; Porter-O'Grady, 1994).

The benefits of the shared governance model are staff empowerment, the enhancement of employee involvement, and the ability to maximize resource utilization through shared decision making with the front line workers. This collaborative process fosters professional autonomy and job satisfaction resulting in less complaining, more positive attitudes/behaviours and more open and honest communication (Belasco & Stayer, 1993; Edwards, Farrough, Gardner, & Harrison, 1994; Porter-O’Grady, 1994).

The challenges of this model center on implementation. Strong leadership is required and organizational change readiness must be assessed carefully, as the model requires a shift from a traditional hierarchical decision making process to an empowered staff decision making process. Specifically, governance members need to develop ownership of issues and of the decision making processes. Traditional managerial roles and structures are threatened by this approach and different professional groups may have discrepant perspectives as to the appropriateness of the proposed structures that can make collaboration a challenging venture. One of the main issues that had to be resolved if Scarborough General Hospital was to utilize this model was how to involve the union representatives in making what were perceived as management decisions. This would require education, support and encouragement to increase the willingness of staff to be empowered to make decisions but also to accept the responsibility and accountability that
went along with that empowerment. It was recognized that establishment of the council and committee structure and the facilitation of teams required considerable time and effort and implied new roles and expectations for almost everyone in the organization (Edwards, Farrough, Gardner, & Harrison, 1994; Porter-O’Grady, 1994).

**Program Management**

The next model reviewed was program management (also referred to as collaborative practice management). Program management may be described as a decentralized management structure organized around both inpatient and outpatient clinical programs. The major distinction is the scope of decentralization. In the program management model decentralization is far broader and extends beyond the patient care unit to include administrative, financial and managerial decision-making functions (shared by medicine, nursing, administration and professional services) which are decentralized to the program levels (Charns & Smith Tewksbury, 1993; Harber & Eni, 1989; McHenry, 1994). In the pure program organization, each division is organized like a mini-hospital (Charns & Smith Tewksbury, 1993) which is the case at Sunnybrook Health Sciences Centre. In practice however, it is rarely possible to duplicate all of the services required for each program due to the expense involved and the lack of critical mass to ensure maintenance of competencies and economies of scale.
The benefits of the program management model are that programmatic models tend to strengthen interdisciplinary process through collaboration and sharing of responsibilities. Physicians become increasingly involved in the managerial process and the participative atmosphere enables management to obtain a broader perspective regarding issues that impact upon the programs and services being offered.

Despite its strengths, the programmatic structure poses significant leadership challenges (Charns & Smith Tewksbury, 1993; Harber & Eni, 1989). In order to achieve full potential from the model, the development of team decision making skills and processes are critical. Program managers must be highly skilled in team process and facilitation, conflict resolution and change management. There is reduced ability to pool and share resources and reduced control over organization-wide policies. There is also a tendency for this structure to foster a territorial mind-set by program, resulting in an individual profession’s loss of a collective voice since they tend to be swallowed up by the overall program structure. When one profession begins to report to another there may be dysfunctional consequences for both the organization and the professional groups involved due to a sense of loss of professional autonomy, prestige and job security.

Service/Product Line

Another organizational model reviewed was service or product line management (also be referred to as strategic business units, core business units, centers of excellence and market management models) and is similar in concept to program management. This
model attempts to efficiently manage and co-ordinate services for similar patient groups often referred to as patient aggregations, which may be organized by major diagnostic category or case type (Harber & Eni, 1989; Naidu, Kleimenhagen & Pillari, 1993).

Examples of patient aggregates are adult ambulatory care, transplant programs, paediatrics and orthopaedics, with each decentralized area managed either by a physician, program manager/coordinator or by a program committee. The culture in this model encourages risk taking and exploration of new ways of providing care. There is also a market share orientation that means there is an ongoing attempt to find ways of increasing patient volumes and expanding the type and scope of services offered. The model tends to be very customer focused with an emphasis on quality and patient satisfaction.

The benefits of this model are most significant for larger hospitals and facilities that feature local areas of excellence (such as large academic campuses) in their service mix and are identified as “best in performance” (norm referenced) according to peer group measurement indicators. This refers to the hospital’s ability to reach performance standards that have been identified as benchmarks and meet predetermined clinical outcome requirements reflective of best practice in that area of expertise and service. The Canadian Institute of Hospital Information (CIHI), the Institute for Clinical Evaluative Sciences (ICES) and the Ministry of Health (MoH) routinely collect these measurement indicators. It allows peer group comparison, and is used both internally by the organization and externally by the Ministry of Health, the Health Service Restructuring Commission and other regulatory agencies such as the Canadian Council for Health
Facilities Accreditation to make decisions around funding, program allocations and accreditation awards.

For efficient use of this model there is a requirement for large patient volumes within each selected aggregation in order to achieve economies of scale supporting a more efficient use of resources. Smaller community hospitals often have a much narrower scope of service provision (no paediatrics, tertiary surgery, or specialty programs), smaller referral populations, and limited access to support services (laboratory, radiology, physiotherapy etc.) and as a result may not achieve significant benefits from this type of structure. The key concept of service or product line management includes minimizing service duplication and increasing resource utilization through economies of scale that requires adequate volumes be maintained. Consequently, the service specialty focus in large hospitals permits increased service quality and excellence in highly specialized areas such as transplant programs, dialysis programs, burn care, cardiovascular and neuroscience programs (Harber & Eni, 1989; Naidu, Kleimenhagen & Pillari, 1993).

As stated, the challenges or limitations of this model relate mainly to smaller community hospitals where it may not be appropriate due to the smaller patient volumes and limited scope of services provided. A criticism of the service or product line management model is that it is too business focused and is therefore not appropriate to a health care setting, since it uses terminology such as products, product groups, service regions, and markets. In order to apply it to health care, it is necessary to take these concepts and extrapolate them to the health care setting. Like many other professionals,
health care workers are reluctant to equate professional services to manufacturing or business and to think of patient care aggregates as product lines or services. Based on this, there has been a tendency to view product line management as having limited value for health care. Other concerns with the application of this model involve the potential increase of administrative expenses as a result of increased management personnel that may be required to support the structure (Harber & Eni, 1989; Naidu, Kleimenhagen & Pillari, 1993).

**Matrix Models**

The problem of designing and implementing an adaptable organizational structure has resulted in a move towards a “mix and match approach”. Options range from mechanistic (with its emphasis on rules, procedures, clear hierarchy, centralization and task orientation) to organic (with its emphasis on flexibility, individual initiative, decentralized processes and individual creativity). The mix of styles is also affected by the nature of the environment in terms of its degree of simplicity/complexity and its stability/instability. The more complex and unstable the environment, the more organic the organization should be in order to be able to adapt more quickly to change, support decentralized authority and encourage more participation in the decision making process.

Most organizations find that some variation of selected structures provides the best reporting relationship and horizontal linkages to achieve organizational goals. A matrix structure sometimes provides a solution to this need to combine aspects of various models
since a true matrix organization balances the strengths of program management and traditional or functional models. In a matrix, these two models are superimposed (Charns & Smith Tewksbury, 1993) with many staff becoming responsible to more than one boss. An example of this could be nurses or physiotherapists whom may both report to the Director of Orthopaedic Programs as well as to their individual Director of Nursing and Director of Physiotherapy respectively.

The strengths and weaknesses of the matrix model are similar to those in both the traditional or functional and programmatic models. The matrix model promotes flexibility to respond to changing needs in an environment which is undergoing radical change and transformation but the dual reporting relationships also create an ambiguity and potential for conflict since clear lines of authority and communication tend to be lacking. There is also a potential for higher administrative costs due to increased time requirements for support, communication and the development of team and management processes.

Review of Patient Care Delivery Models

Having reviewed the relevant organizational design models, the next focus of review was to determine the most appropriate patient care delivery model for Scarborough General Hospital (see Figure 3). The appropriateness of any specific patient care delivery model depended on the outcomes desired, the needs and preferences of the organization and much of the overlap discovered in the various models related to the philosophy upon
which they were based and to their key operational components. Patient care delivery methods adopted by many organizations are closely related to their organizational structure models.

Service or product-line management is used as a framework for care delivery within a traditional functional organizational model. Interdisciplinary and collaborative approaches to care delivery are common in matrix and program management models as well as in the case management or managed care models with their cross-disciplinary reporting and accountability structures. All of these care delivery methods rely heavily on interdisciplinary care planning tools such as care pathways and interdisciplinary process structures such as patient care teams. With the use of clinical teams in these models, management layers are replaced with team leaders who coach and facilitate. Authority and decision making (to varying degrees) becomes the responsibility of each team member and teams become empowered to independently communicate and coordinate their activities. The patient focused care model demonstrates maximum overlap with the other models described since it encompasses patient care teams, elements of managed care, clinical practice guidelines all within a program management or shared governance structure.

As previously discussed, shared governance is a managerial/administrative model in that it has shared accountability and responsibility in terms of managerial decision making yet it plays a critical role in influencing policy and practice in relation to clinical care delivery. As indicated, more important than the model chosen is the method in which
it is implemented, the type of training and supports available to the staff and the leadership shown throughout the process.

For the purposes of this discussion it is important to note that Scarborough General Hospital initiated their change process with the stated priority that patient centered care was their preferred model. This model would provide a philosophy for the design of care delivery to meet the competing demands in today’s environment. As

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<td>* total patient care</td>
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Figure 3. (Excerpt from Figure 1) – framework for review and discussion of patient care delivery models.

indicated, the patient centered care model combined components of multiple models and could be further customized by the organization.

**Patient Centered Care**

*Patient centered care and patient focused care* are used synonymously in much of the literature. As a model of patient care, patient centered care reflects a value-based framework that encompasses the following dimensions (Eni, 1994; Anderson, 1993; O’Malley & Serpico-Thompson, 1992; Robinson, 1991; Sherer, 1994; Sherer, 1993a):
A paradigm shift from the traditional departmental focus to a patient centered focus. The patient is seen to be the center of all activity and his/her needs drive or are integrated into the design and delivery of all related services by the various professionals;

An emphasis on interdisciplinary team management, communication, collaboration and coordination among health care professionals and a sense of shared values to achieve a common goal;

A restructuring of care delivery processes and a mandate for organizational as well as personal growth and development. In this model, health care providers are provided various supports such as professional development in order to retain current workers and recruit future health care workers.

Jirsch (1993) points out that by identifying the patient as the priority customer, health service organizations are able to simplify, refocus and redesign their structures and functions so that resources and personnel are organized and allocated based on patient-care needs. He states that "redefining the organization in the context of patient need profoundly changes the work place, creating less rigid, flattened organizational structures and emphasizing leadership rather than managerial activities" (p.27).

In adopting the patient centered care model, Scarborough General Hospital needed to address the following problems. Many jobs had narrow responsibilities and employees with different titles were performing similar tasks. The current reward system was based solely on individual performance rather than team performance and there was a lack of
clear process for knitting employees together into cohesive teams. Solutions to these problems required: development of shared values which would support the achievement of common goals; empowerment of front-line staff in order to enhance employee responsibility and autonomy; a corporate culture of excellence (as identified in the Continuous Quality Improvement philosophy); and support for creativity and innovation. It was hoped that the end result of this new organizational structure and redesigned patient care processes would create an environment where work would become more meaningful, employees would feel empowered, and job satisfaction would be fostered through collaboration, continuous learning and open communication.

As indicated, the changes required to achieve a patient centered care model included organizational restructuring, a redesign of job tasks and employee roles, and the creation of patient care teams of multi-skilled workers capable of providing services directly on the patient care units. One of the challenges to the development of interdisciplinary patient care teams was the requirement of a major commitment from everyone, frequent meetings and lots of hard work. This investment in time and people was absolutely crucial in order to reap the rewards and benefits of this model. This meant training for staff in team-building strategies, facilitation, communication and conflict resolution. It also required leaders to mentor staff and assist them in accepting new roles and becoming comfortable with new and expanded job responsibilities.

Consistent with this model, the hospital’s change teams had to recognize the need for significant decentralization of services, cross training and multi-skilling of staff,
broader job definitions, work simplification and redesign, and aggregation of patients with similar needs. Jirsch (1993) supports that by placing the patient at the center of the organization, one draws attention to the alignments that must exist between organizational strategy, systems and people for successful achievement of patient-centered care (p.28).

The identified objective of a redefined health service organization that would meet patient centered care included both the realigning of organizational strategies and the realignment of people and systems based on meeting patient needs. One approach to achieving this was through interdisciplinary team management that removed the traditional boundaries between disciplines and departments. It also created less rigid structures (broke down the silos) and promoted the continuous quality improvement and utilization management activities identified earlier. This model encouraged and supported the sharing of ideas for improvements with staff in other disciplines, the participation of everyone who would be affected by a change decision, and helping others work more efficiently. Collaboration and teamwork are considered to be extremely important and a collective sense of responsibility is crucial for the success of the change initiatives.

Central to the patient centered care model is the amalgamation or re-grouping of patients according to their similar needs. This also requires a re-arrangement of relevant services closer to the groups of patients they are designed to serve - as opposed to being grouped to meet the needs of the professionals or departments (Eni, 1994; Weber, 1991). This can result in the formation of satellite services being established on the patient care units and a decentralization of professional groups such as speech pathologists, dietitians
and physiotherapists. In a patient-centered care environment, one of the challenges has been to determine what are the appropriate patient aggregations for whom appropriate operating environments can be developed.

There are many approaches to patient aggregation ranging from the traditional groupings based on medical need (orthopaedics, obstetrics, urology) to other criteria which range from predictability of patient processes (routine/complicated), the ability to schedule the patients (elective/urgent), as well as length of stay (day surgery/in-patient). When using length of stay, the shorter the length of stay, the easier it is to design operating processes that deliver high levels of continuity with care givers. The longer length of stays usually result in patients moving into different categories of care requirements and receiving care from a larger range of care providers. Appropriate aggregation of patients must also address the skill mix of staff required to provide the necessary care in the most efficient manner as well as providing opportunities to streamline workflow, and resource consumption.

In the patient-centered model, staff skills and functions must be expanded in order to achieve maximum efficiencies in resource utilization. It was recognized that application of this model at Scarborough General Hospital would involve the use of multi-skilled and cross-trained workers and would result in a reduced number of job classifications, adjustment of staff mixes, and delegation of functions to alternative or non-licensed care providers. The type of worker utilized and the configuration of the core service teams would depend on the needs of the organization as well as the individual service delivery
unit in question (Lanthrop, 1991; Robinson, 1991; Sherer, 1993b; Rudd, 1994). The most important element in deciding how new patient care aggregates are determined is to group patients whose needs are as closely related as possible.

Another aspect of the patient centered care model which would have to be addressed at Scarborough General Hospital was the layout of the work site since it was recognized that this layout could either inhibit or promote the collective sense of responsibility which was being promoted. An appropriate physical layout can encourage employees to share information about one another’s work and to try out new ideas openly, or it can prevent people from spontaneously sharing information, seeing how others do their work, and noticing opportunities for assisting other team members. When people cannot see others at work, misconceptions can arise about the nature of the jobs, and about the pace, pressures and commitment of other employees. Changes in the physical plant are often required to support the selected patient aggregations and the hospital’s transformation to a patient centered care model. Where volumes permit, services or programs such as rehabilitation facilities, pharmacies or diagnostic imaging may want to construct satellite units closer to the patients being served. The extent of renovations and retrofitting required varies depending upon the existing facilities as well as the needs of the patient groups. However, the costs are almost always significant and many older facilities lack the flexibility to accommodate these changes.

While it can be argued that health care professionals have always been patient focused, it can also be argued that many of the care processes and functions they carry out
have not been. An example of this would be the registration and admission process that in a patient-focused environment is located right on the patient-care unit rather than in a central department making it much more convenient for the patient. Simply put, technology and services move closer to the patient unit and patient care activities are redesigned in order to streamline processes, gain efficiencies, and improve the quality of services provided (Eni, 1994; Weber, 1991; Abst, Hofer & Leafgreen, 1994; Clouten & Weber, 1994; Eubanks, 1991; Hudson, 1991; Lanthrop, 1991; Moffitt, 1994).

Many studies have reported on the very high proportion of dollars (3:1) that are spent on time waiting for care, arranging or planning care, and documenting care versus what is spent on the actual delivery of direct care (Lanthrop, 1991). This disproportion of time and dollars has provided a focus for much of the process redesign activities. Good examples of this are the changing expectations around documentation. The redesign of documentation processes has been aimed at achieving a computerized patient record using a “documentation by exception approach”. Documentation by exception utilizes documentation guidelines and computerized flow sheets to document routine care and outcomes that are expected for specific types or categories of patients.

This type of documentation is based on the assumption that the care was provided for the patient and expected outcomes were achieved as identified in the organization’s written protocols or standards of care unless noted otherwise. Staff no longer use narrative charting for routine daily activities such as bathing, ambulation, normal responses to therapy but rather use codes on a flow sheet to reflect this expected level of activity and
response. Narrative charting in this system is done only when the care provided is different from what is expected for that type of patient (as defined by the organization’s standards of care). The result is that less time is required to document the care and more time is available for staff to actually deliver the care. Patients are evaluated against well-defined goals so that resulting documentation reflects the patient’s degree of progress towards achieving these goals and when expected outcomes are not achieved there is a narrative note describing the variation in detail. Since all documentation is used by the multi-disciplinary team this reduces duplicate charting, increases the timeliness of information and improves communication among team members.

As part of the patient centered care model, clinical practice guidelines provide a consistent, comprehensive approach for the provision of medical care and treatment for specific case types, conditions or illnesses. These guidelines are research or evidence based to achieve effective and efficient medical management by ensuring consistent practice patterns among all clinicians since they often incorporate explicit criteria for treatment, orders and follow-up. Although practice guidelines have traditionally been associated with physician practice they are more recently becoming recognized as a multi-disciplinary tool and have become a key tool in areas of advanced practice such as emergency department triage and oncology specialized care units.

The benefits of using clinical practice guidelines are that they incorporate reliable information regarding risks and benefits of treatment options. Their utilization serves not only to improve the quality and consistency of health care delivery, but also to maximize
the efficiency of scarce medical resources. Clinical guidelines are based upon recognized standards of care and provide concrete benchmarks against which the quality of care can be assessed. They also provide a consistent approach to treatment and promote achievement of improved clinical outcomes (Mittman, Tonesk & Jacobson, 1992; Spiegel, Shapiro, Berman & Greenfield, 1989).

In spite of obvious benefits, there are challenges, since the development of clinical guidelines can be complex and time consuming and require commitment especially from the medical staff. Successful implementation is dependent upon proper and expert development as well as widespread application in routine medical practice. Some argue that practice guidelines are a substitute for proper clinical judgement and they inhibit the individual autonomy of health care providers as well as patient choice. In this sense it is important to remember that the ultimate intent in the utilization of practice guidelines is to maintain and improve the quality of medical practice, while simultaneously contributing to improved patient outcomes and cost effectiveness (Mittman, Tonesk & Jacobson, 1992; Kritchevsky & Simmons, 1991).

The benefits of patient focused care models have been shown to be numerous. Productivity is improved through enhanced utilization of staff skills and expertise, process steps are eliminated resulting in service simplification and caregivers are able to spend more time on direct care activities, which promotes increased satisfaction for both patients and staff. In addition to flattening traditional organizational structures and simplifying care delivery processes there is improved communication and sharing of information among
workers (Henderson & Williams, 1991a; Weber, 1991; Abst, Hofer & Leafgreen, 1994; Kohn, 1994; Smith, 1994; Rudd, 1994). As with any change, there is often significant discomfort. The challenge is to gain and maintain the support and attention of individuals in leadership roles.

This transformation requires leaders with a broader skill base in order to provide support and direction for the selected change initiatives. Skills such as project management and change management were fundamental to the success of the change initiatives. Human resource issues become a primary focus in a change environment and have to be dealt with pro-actively. Collapsing of job categories and altering the mix of professional categories (registered nurses, registered practical nurses, and multi-skilled workers) signals the potential for job loss and causes significant anxiety and stress for employees. Activities such as multi-skilling and cross training are perceived as blurring the boundaries between professional roles and result in the potential for power struggles among the different disciplines. These issues require skillful and careful human resource management (Bernd & Reed, 1994; Boston & Vestal, 1994; Clouten & Weber, 1994; Sherer, 1994).

**Managed Care**

The next model examined was managed care that builds upon the concept of practice guidelines just discussed. This model utilizes tools known as clinical pathways, patient care pathways, or clinical care protocols. This model is referred to as managed
care because it uses pathways or protocols to provide a streamlined approach of managing or guiding patients through their hospital stay. The purpose is to reduce length of stay, minimize costs, and achieve quality outcomes through the consistent application of sequenced care protocols and outcome indicators. These efficiencies are accomplished by establishing care protocols that arrange the care or treatment events that should occur during the patient's hospital stay in a chronological order in order to achieve discharge within a targeted length of stay.

As well, pathways include outcome indicators to ensure the patient is progressing as he or she should and appropriate measures are instituted if the expected progress is not being achieved. With the managed care approach, several issues center on the use of care pathways or care maps. One of these issues identified with the use of pathways is the reluctance or discomfort of some care providers in sharing the maps with patients and their families. There is some fear of liability in terms of the care planning and increased expectations of patients based on what could be termed a blueprint for their recovery. It is sometimes difficult to explain that while the pathway outlines the standard course of treatment for a specific group of patients, there will always be patient-specific parameters that must be recognized and dealt with. This may result in some patients taking more or less time in one phase or requiring additional steps in order to move on to the next phase of care.

Another concern is that not all patients are the same, and therefore may not fit into a "cookie cutter" approach to care delivery. This concern is usually overcome through
education on how to modify pathways to accommodate individual patient care needs. Other concerns involve the perception of some physicians that pathways are simply another way for administration to direct or dictate physician practice and the use of these tools reduces the physician's ability to provide care in a manner perceived as appropriate to meet the needs of individual patients.

The last issue involves deciding which approach is taken in the development of the pathways. The decision is whether to base them on current practice patterns (status quo), or aim for a stretch goal which challenges the professional team to improve efficiencies and outcomes in order to achieve benchmark or best practice. Whatever choice is made, there must be support from the various team members (especially physicians) that the elements of the pathway represent appropriate practice for their discipline and meet standards of practice requirements (Collard, Bergman & Henderson, 1990; Healey, Loukota, Sears, Miles & Galbraith, 1994).

Care pathways or care maps support the desired interdisciplinary approach to patient care as well as provide an excellent tool for patient and family teaching. They standardize approaches to care delivery for specific patient aggregates and provide an effective communication tool for the interdisciplinary team. They are also valuable as a support tool for new practitioners or staff who are relieving in an unfamiliar area since they are very specific as to the care requirements and expected outcomes for each individual patient type. Hospitals that have implemented pathways have shown that not only do they reduce length of stay while preserving quality, they also support utilization
management since they facilitate variance tracking by identifying patients who deviate either in a positive or a negative way from the predicted course. This information can then be analyzed for significance and used to help identify areas for improvement in clinical practice as well as improvements in the pathways design (Collard, Bergman & Henderson, 1990; Rasmussen & Gengler, 1994).

Case Management

The case management model is another expansion of the managed care concept that encompasses all of its key elements but includes the utilization of a designated case manager. In some organizations, the position of case manager has presented a type of career laddering by providing role expansion and opportunities for professional growth and development. Similar to the other models, case management involves the assessment, planning, delivery and co-ordination of service as well as the monitoring of that service, to ensure that the multiple patient-care needs of the client are met as efficiently and effectively as possible. It requires an interdisciplinary approach which is coordinated by the case manager, who is most often a registered nurse, (Marr & Reid, 1992) and requires the formation of care teams composed of expert professionals from each discipline that will be involved in providing care for that particular group of patients.

The approach is aimed at a cost and quality balance by standardizing resource utilization to meet predetermined outcomes, promoting continuity of care delivery, and enhancing job satisfaction (Collard, Bergman & Henderson, 1990; Cesta, 1993; Olivas,
Del Togno-Armanasco, Erikson & Harter, 1989a; Rasmussen & Gengler, 1994). Benefits of case management are similar to managed care. Care teams develop and share a level of expertise that increases the efficiency and quality of the services delivered. This results in greater satisfaction for care providers as well as for patients and families (Collard, Bergman & Henderson, 1990; Marr & Reid, 1992; Olivas, Del Togno-Armanasco, Erickson & Harter, 1989b; Finkler, Kovner, Knickman & Hendrickson, 1994).

**Team-based Nursing Models**

Integral to most of the models discussed, patient care teams (referred to as primary care teams and self-directed care teams, or inter-disciplinary teams) reflect an autonomous team approach to managing patient care (Hamilton, 1993; McHenry, 1994). As stated, the structure of the care team is usually horizontal and alignment is by patient type rather than by department or profession. It involves a specialized multi-disciplinary group of expert caregivers meeting regularly to focus on the provision of care to designated patient groupings (Hamilton, 1993; McHenry, 1994; Kretz, 1994; Townsend, 1994).

The benefits of this approach are enhanced interdisciplinary collaboration and communication that serve to increase productivity of team members individually, as well as that of the team as a whole. The job scope of team members is broadened as members learn new skills and competencies and the result is often a cross functioning of team members. Once again, the efforts of the team, coupled with the increase in a patient
centered approach to care delivery serves not only to increase patient satisfaction but also to improve levels of job satisfaction for staff. For patient centered care to be successful, there needs to be considerable investment in the training of team members and achievement of new paradigms around communication and collaboration among team-members (Henderson & Williams, 1991a; McEachern, Schiff & Cogan, 1992; Townsend, 1994).

Maintaining control is also a challenge since autonomous team members may threaten managers in traditional models. Leadership roles change significantly and individuals must seek a balance between taking too much control on the one hand and losing control of the process on the other. In spite of the challenges, patient care teams provide an excellent vehicle for the improvement of care delivery, either independently or as an integral part of alternate care delivery models.

One example of how teams have been used in the past includes functional or team nursing, which was popular in the 1950's and 1960's. This approach to patient care involved dividing a patient care unit into nursing teams who would then be responsible for providing care to an assigned group of patients. Each team was led by a registered nurse who acted as the team leader and supervised and coordinated the nursing care delivered by each of the team members. Tasks tended to be divided up in components and distributed or delegated to team members based on the skill level of the care provider. This usually resulted in the registered nurse (RN) doing the medications and complex treatments, the registered practical nurse (RPN) doing routine care and aides performing support
functions. The benefits of this model were the efficiencies achieved through the assignment of activities according to skill levels and having an assigned team leader who was knowledgeable about every patient on that team. This facilitated communication especially to physicians, and coordination of all aspects of care (Giovannetti, 1980; Manthey, 1980).

The challenge with the functional or team model was the model's task focus versus a patient centered focus and the model's failure to maximize the full potential of the skill levels of the care providers. The job scope tended to be narrow resulting in multiple care providers having contact with the patient in order to deliver the full spectrum of care required by the patient. This resulted in decreased satisfaction for both the patient and the staff member. Communication was fragmented, time consuming and costly since there were many layers to the team reporting process.

Another model that makes use of teams is the nurse extender model that uses associate-nursing personnel and also arranges providers into core service teams. Extender models may be traditional and use a registered practical nurse (RPN), ward aide, ward clerk, and an orderly in conjunction with the registered nurse. Newer versions may include the use of a multi-skilled worker such as a patient service associate (PSA). This model also allows registered nurses to work with personnel who have advanced technical skills such as nurse clinicians, nurse practitioners and other discipline specific care technicians (Ritter & Crabtree-Tonges, 1991).
The category of personnel used in this model varies considerably depending on the needs and preferences of the organization but regardless of whether the assistant personnel are licensed or unlicensed, they support the registered nurse in patient care activities. The tasks that assistant personnel perform vary from clinical activities such as the taking of vital signs and weights, performing hygiene and basic grooming to the other end of the spectrum of non-clinical functions including housekeeping, meal delivery, restocking of supplies and portering. In some institutions there is a combination of these clinical and non-clinical functions (Crabtree-Tonges & Lawrenz, 1993).

Utilization of this nurse-extender model results in performance and productivity improvements. Registered nurses (RN’s) and registered practical nurses (RPN’s) have more time to spend on direct patient care and cost savings are achievable because RN’s perform only those tasks requiring the special skills and training of a registered nurse. There is also less “waiting for action time” since several tasks are now integrated into one job profile allowing for more efficient use of time and personnel. Job satisfaction may also be enhanced because staff perform a more appropriate and desirable repertoire of skills and functions and patient satisfaction may be increased as a result of efficiency of service delivery (Wilson, 1994; Lengacher, Mabe, Day Bowling, Heinemann, Kent & Van Cott, 1993; Stroud-Gheysen, 1994).

There are three major challenges associated with the nurse extender model. The first is education and support of staff, with emphasis on the RN group, since they must learn to delegate, communicate and work together collaboratively with the assistant
personnel. In addition, all staff regardless of their professional designation must have the appropriate skills required for their assigned levels in order for the model to work properly. This requires significant investment in education, training, skills monitoring and evaluation. The second challenge is determining the correct mix of staff. This is logistically complex, and varies among clinical areas and requires careful analysis and planning to avoid costly mistakes. The third challenge involves the concerns relating to professional liability around the use of non-licensed providers, some of whom include completely new designations such as the multi-skilled worker, to perform functions that have traditionally been the domain of registered nurses (Townsend, 1994; Lengacher, Mabe, Day Bowling, Heinemann, Kent & Van Cott, 1993; Stroud-Gheysen, 1994).

**Primary Nursing**

Another care delivery model that evolved from the team-nursing concept was primary nursing. This model allocated 24-hour responsibility and accountability for a group of patients to one registered nurse in an attempt to improve continuity and quality of patient care. The key concept of this approach was that the same nurse would have total responsibility for the assigned patient for their total length of stay in hospital. This included responsibility for ensuring timely and appropriate communication to all members of the care team and to the family and ensuring continuity of care through appropriate care plans that were readily available and were designed by the primary nurse to meet all of the identified needs of the patient. The primary nurse, as both the planner and provider of
care, also assumed major responsibility for appropriate preparation of the patient and family for discharge. In the absence of the primary nurse, associate care providers followed the patient’s plan of care. This plan of care provided key instructions and information about the patient and the care to be provided.

One of the major benefits of this model was the increased continuity of patient care as a result of improved communication among staff, and between care providers and the patient. As well as continuity being enhanced through the care plan (since relevant information was readily available), communication was also more direct and together these promoted enhanced patient care relationships and levels of staff and patient satisfaction. Although primary nursing may be an effective model to promote increased continuity and satisfaction with care, it is not a solution for many of the operational issues and problems challenging health care today - issues such as workload management, coping with financial constraints, and the push to use unlicensed care providers.

The primary nursing model calls for a staff made up entirely of registered nurses, which is costly and difficult to maintain. There is also the problem of dealing with staff fears, since this model places full responsibility and accountability for the patient’s care on one primary nurse. To be successful, primary nursing requires major investment and support for training and development since the primary nurse must be equipped with the proper skills to plan and coordinate care effectively. A disadvantage with this model is that many staff dislike the idea of caring repeatedly for the same patients. There is the potential for the primary nurse to become over-involved emotionally with the patient and
family, which may contribute to over-dependency on the part of the patient and burnout for the nurse.

**Total Patient Care**

The next model examined was total patient care which is a system of nursing care delivery where the nurse is assigned to a patient to provide all aspects of care to that patient for one complete shift. Total patient care is different from primary nursing in that the total patient care model assigns responsibility for the patient for just the one shift and not for the patient’s entire length of stay as is done in the primary nursing model. Another difference lies in the way care is planned and teaching is delivered since each individual assigned to the patient contributes to the plan of care rather than a single nurse. In this model the registered nurse is responsible to provide the professional components of the patient’s care requirements for all of the registered practical nurse (RPN) providers - care which includes complex assessments, treatments such as dressing changes and administration of medications.

One of the benefits of this model is that the care provider is intimately knowledgeable about his/her patients because of the totality of the care provided. Since the scope of job performance is broad, it facilitates increased direct care time, as well as continuity of service delivery. This in turn maximizes and supports the nurse-patient relationship. Similar to primary nursing, one of the limitations of total patient care is its inability to maximize the efficient use of resources. In both of these models, registered
nurses spend a large percentage of their time performing tasks that another level or category of provider could perform: tasks such as bathing, grooming and other hygiene functions. It has also been argued that total patient care does little to enhance or promote the professional image of nursing because in this type of model nurses are perceived as doers of routine tasks rather than the planners and coordinators of patient care.

To support the hospital’s organizational and process redesign initiatives there was identification of several overarching elements that were perceived to be necessary for successful achievement of the desired outcomes. These overarching elements were appropriate leadership, planning, organizational competencies, empowerment of staff and education and support systems. The desired outcomes were more effective methods to provide quality health care using employees as partners, capitalizing on the strengths of the organization and promoting innovation and creativity.

**SGH’s Selected Organizational and Patient Care Delivery Models**

In summary, based on the strengths and weaknesses of the models discussed, Scarborough General Hospital chose for its new organizational structure a hybrid combination of the traditional/functional, program management and matrix models. For patient care redesign, the model chosen was patient centered care which focused on increasing the continuity of patient care through a managed care approach, the use of
multi-skilled workers, empowerment of multi-disciplinary teams, and the use of patient aggregates to achieve efficiencies.
CHAPTER THREE: METHODS AND PROCEDURES

Overview

Traditionally, the health care sector has used meta-analysis as a statistical tool in clinical trials analysis reporting. Light and Smith (1971) were among the first to propose pooling original data from previously published research studies. By working with statisticians they were able develop a more quantitative and mathematical approach to simplify the process of analyzing this data. Glass (1976) was the first to use the term meta-analysis when referring to this statistical approach of pooling and synthesizing data from similar but disparate experiments.

The basis of meta-analysis is the comparison of findings from available published studies with findings that one would anticipate or expect. Boden (1992) warns meta-analysis studies must be conducted with enough rigor and design to be above reproach and criticism. He points out that one of the shortcomings of using this approach is that data required for further analysis and verification may not be available. Meta-analysis can range from the most basic calculations using information taken from fully published articles to those based on carefully collected, checked and reanalyzed individual data and the methods used in any single meta-analysis may lie anywhere between these two extremes.

When considering the methodology options for evaluating the effects of the change initiatives at Scarborough General Hospital, it became apparent that a consistent method
of evaluation had not been built into the hospital's extensive change process. However, it was known that a very extensive longitudinal database existed that could be used to address the specific research questions of this study. Based on this availability of relevant information and the researcher's ability to access it, an adaptation of the meta-analysis process was chosen to complete this study. This adapted meta-analysis process was used to critically analyze the effects of Scarborough General Hospital's organizational restructuring and process redesign on access, scope, financial and operational viability, quality, and levels of satisfaction.

As the researcher in this study personal location included being not only an employee of Scarborough General Hospital but also a member of the senior management team with a key role in the change strategies. This personal level of involvement provided pros and cons in terms of ability to objectively complete this study. Some of the pros included being knowledgeable of the various data sources, having access to these data sources and having the ability to obtain hospital approval to complete the study. A potential con was that some might view the reporting of the results of the study as "cheer leading" in style, potentially biased, and overly positive of the results achieved. It was for this reason the meta-analysis process was even more appropriate since use of meta-analysis recognized that there was no ability to change events merely to observe them. Since no new data was collected for the study, and no data manipulation occurred other than arranging data elements in appropriate tables and figures for discussion there was minimal opportunity for contamination of the data by personal bias.
It was recognized that one drawback of the meta-analysis process was that it provided no ability to determine cause-and-effect in any rigorous sense. It was also recognized that use of secondary data sources could have potential disadvantages since they may be subject to instrumentation bias, where the data collection methods change over time, limiting comparability. This was not a problem in this study since the reporting criteria and data collection methods were stable over the period of the study and adhered to external standards that were routinely audited for accuracy.

In health care, the types of databases available for research have changed dramatically with the advent of internal hospital financial and utilization data collection systems and with the implementation of the Ontario Government’s Management Information System Guidelines (MIS). These information systems have resulted in a database that is ideal for use in a meta-analysis since it consists of a comprehensive reporting system that ensures the consistent collection of high quality, comparable data. On other levels, this data is used to support evidence-based decision making, hospital funding, hospital management and restructuring decisions. However, since few health care data systems are specifically designed for research, the task of designing a study using available data required a high degree of familiarity with the data being collected. As the researcher and author of this study, a high level of familiarity with the data was ensured due to the corporate role held and involvement in most of the change initiatives either as a team leader or as a facilitator for many of the change teams.
As indicated in Figure 4, this was achieved by analyzing data from the internal and external statistical reports, external review documents and internal committee minutes that would be the equivalent of the “pooled disparate studies” normally used in this type of process and applying them to the research questions. The use of meta-analysis, as an explanatory research tool, was felt to be appropriate since one of the strengths of using this process in this study was the ability to validate the data sources and ensure an objective reporting of information to support the conclusions.

As indicated, the primary data sources for the meta-analysis in this study were considered to be valid since they adhered to the reporting requirements of the Ontario Ministry of Health and the Canadian Institute for Health Information. In health care, like many other organizations with complex systems, computerized databases have become mandatory for reporting purposes. These systems must adhere to the standards and reporting requirements of the governing and funding bodies to which they are held accountable. Although data collection in these systems is generally driven by fiscal and management concerns, other valuable data are obtained and stored in the process. These databases offer an excellent opportunity to explore research questions in particular those that require information over time, without gathering new data. This was very important, since this meta-analysis was based on the use of existing data and did not include the introduction of any new data elements for the purposes of this study.
Meta-analysis Design Utilized in this Study

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<td>* Quality</td>
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<td>* Process (work) redesign</td>
<td>* Scope</td>
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<td></td>
<td>* Satisfaction</td>
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<td>* Financial viability</td>
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Data/Review Sources
(*Pooled data* from disparate sources)

**Internal Data Sources**
- SGH Financial and Utilization reports
- Meditech real-time data base

**Internal Key Personal**
- Director and Managers of
  - Finance
  - Occupational Health
  - Health Records
  - Human Resources
  - Chairs of Change Teams

**External Data Sources**
- Ministry of Health reports (MoH)
- Canadian Institute of Health Information (CIHI)
- Canadian Council for Health Services Accreditation (CCHSA)
- Canada Awards of Excellence Evaluation Report
- Institute for Clinical Evaluative Sciences in Ontario (ICES)
- Richard Ivey School of Business Report
- Conference Board of Canada Report
- Academic Alliances and Partnerships

Data for Qualitative and Quantitative Analysis

**Quantitative analysis included review of:**
- Bed reductions
- Separations (discharges)
- Total number of patient days
- # weighed cases and Average RIW
- Inpatient volumes and occupancy rates
- Elective surgical cases
- Average daily census and length of stay
- Newborn admissions (births)
- Selected service volumes (rehab, chronic, Emerg.)
- Sick time by union groups
- Employee stats (incidents, modified work, ERU)
- NEER Assessment refund
- FTE’s by union group
- Patient incident stats (meds, falls, treatment etc.)
- Patient Complaints
- Funding reductions and Cost per case
- Salary ratio paid hours to worked hours
- Salary benefits as a % of operating expenses

**Qualitative Analysis included review & coding of:**
- Satisfaction rates
  - Conference Board of Canada
  - SGH’s Patient Comment Cards
- Human Resources organizational survey
- Focus group discussions
- Committee and task force minutes
  - Critical Success Factors
  - Strategic Planning
  - Organizational Effectiveness
  - Transition Team
  - Project Design Teams
  - Clinical Resource Management Team
- External assessment reports
  - CCHSA Report
  - Canada Awards of Excellence Report
  - Richard Ivey School of Business Report
  - Institute of Clinical Evaluative Sciences
  - Academic alliances and Partnerships

Content Analysis and Coding for Research Questions and Themes

1. Access
2. Scope
3. Financial viability
4. Quality
5. Satisfaction
6. Other themes (time, layering of projects, adequacy of supports)
7. Overarching themes in the literature (i.e. leadership, education etc.)

Figure 4. Represents the meta-analysis design utilized in this study.
In hospital MIS systems, information is grouped into specific types of activities, using a standardized chart of accounts assigned to identify the different types of services. These accounts have been designed so that they can be rolled-up at different levels to allow comparisons to be made between departments, between hospitals, and between provinces. The validity and reliability of the information systems used by Scarborough General Hospital remain high since these systems adhere to the reporting requirements and guidelines provided by the Ministry of Health. These guidelines identify and explain the types and format of the financial and statistical data required to be reported as well as the links to the MIS account coding structure. In addition, the integrity and accuracy of the hospital’s data is ensured by regular system audits and cross-referencing between data fields to identify coding errors and inconsistencies in data entry, as well as annual external audits conducted by the firm of Ernst and Young. Collection and reporting standards are defined by the Ministry of Health, and as a result the data systems have become increasingly sophisticated, producing the ability to link the fiscal data and the service data in many service areas.

The meta-analysis process (see Figure 4) involved a systematic review of the structures utilized by Scarborough General to support its organizational restructuring and process redesign project. This included review of the redesign committee structure and change teams including their mandates, processes and results. The review process also identified internal and external data sources necessary to address the research question, support conclusions and allow recommendations to be made. The intent of this review
process was to provide a comprehensive overview of the many components of the hospital’s change initiatives in order to allow discussion and analysis of the results within a developed framework. A combination of quantitative and qualitative methods was used to achieve a comprehensive evaluation of Scarborough General Hospital’s change initiatives: the strategies used, the outcomes achieved, and areas for future consideration.

**Study Design**

The study design consisted of several phases using a combination of qualitative and quantitative methods. Existing longitudinal data, on a well-defined population, were utilized to evaluate the impact of Scarborough General Hospital’s organizational restructuring and process redesign on access, scope and quality, productivity, and satisfaction.

The independent variables for this study were *organizational structure, job design, and process re-design* and the dependent variables were *access, scope of services, financial viability, quality, and satisfaction*. Scarborough General Hospital was the convenience sample and the senior management team, divisional directors, staff and patients affected by the change processes were the strategic sample.
Several phases were required to complete the study. The first phase involved a presentation in January 1997 to Scarborough General Hospital’s senior management team to gain approval to proceed with the study using the existing longitudinal database and citing the hospital by name. This approval set the time frame for the study as 1994 through to 1997 and allowed hospital internal and external review documents, financial reports, and other statistical information to be used to address the research questions.

Once formal approval was obtained from the organization to utilize the longitudinal database, the next phase involved confirmation and refinement of the qualitative and quantitative elements of the meta-analysis. This required selection of committee minutes, internal and external reports, and specific data elements appropriate for use in the study. A list of all committees and financial/statistical reports was developed, data elements and categories of information were confirmed, and a coding process to achieve matching of the research questions with the information required to address them was developed.

The SGH staff identified as key resources for internal information were the directors/managers of the departments of finance, health records, occupational health and safety, human resources, and the chairs of the project change teams. Between January 1997 and March 1997 regular meetings were held with these key individuals. The format of these meetings was to confirm the appropriateness of the internal and external
information sources. This included review of all available reports and deciding which reports would provide the data necessary to address the research questions. Discussions also resulted in a fine tuning of the data sets: narrowing the focus of data, determining the best methods for data retrieval, and confirming the appropriate time frames for comparison of individual data elements.

The sources of internal data were confirmed as Scarborough General Hospital’s financial and utilization reports and the hospital’s internal computerized real-time Meditech database. The hospital’s information systems combined patient volume information with financial information on a monthly and year-to-date basis and met the MIS and Ministry of Health reporting requirements. Through meetings with the identified key personnel, the appropriate sources for external data were identified. These external data sources were: Ministry of Health (MoH) reports, Canadian Institute of Health Information (CIHI) reports, Institute for Clinical Evaluative Sciences in Ontario (ICES), the Canadian Council for Health Services Accreditation (CCHSA) survey award report, the Richard Ivey School of Business assessment report, and the Canada Awards of Excellence survey report.

Quantitative review included the data elements as outlined in Figure 4 and included financial indicators, utilization indicators, quality and satisfaction indicators. Financial data elements appropriate for the study were identified as the ratio of paid hours to worked hours. Other financial data elements included cost per case and salary/benefits as a percentage of operating expenses. The utilization data elements identified were total full-time equivalents by union groups, total patient days, patient occupancy rates, and service
volumes in selected programs and services. Other utilization data elements were patient’s length of stay (LOS), number of weighted cases, and total volumes. Some of the quality indicators identified, as being relevant to the research questions was emergency department admitting rates and times, morbidity and mortality rates, and satisfaction rates. Statistics, which would reflect employee satisfaction, were determined to be sick time, WCB (workers compensation), safety incidents, employee rehab unit visits (ERU), and employee assistance program, visits (EAP).

The next phase involved determining which committees, change teams, and external assessment reports needed to be reviewed in order to provide the qualitative component of the study. The committees and groups identified as being pivotal to the study (see Figure 4) included the hospital board’s critical success factors project, the transition team, the clinical resource team, the patient care delivery team, and the organizational effectiveness team. Others were the human resource design team, patient aggregation design team, project change/design teams, and the clinical resource management team. Once the committees and change teams were confirmed, the minutes of their meetings were analyzed to identify the group’s mandate, objectives, implementation strategies, and outcomes.

The last element of this phase included collection, review, and analysis of both internal and external reports to identify and code changes to core services, utilization patterns and levels of access. It also included coding selected questionnaires and surveys in order to address the research questions. Patient satisfaction surveys included the
Conference Board of Canada survey and Scarborough General Hospital’s internal patient comment card. A human resource organizational survey focusing on staff perceptions and satisfaction with equity issues in the workplace was also reviewed. An analysis of the results of focus groups was completed to determine the level of satisfaction with the organizational restructuring and job redesign in order to try and identify strengths, weaknesses and remaining barriers, that would represent further challenges or opportunities for the organization. The targeted focus group sessions were the ones held with the senior management team, the divisional directors/managers, and selected staff who had experienced role changes. As indicated, the qualitative process consisted of review and analysis of focus group discussions, documented external assessment reports, and committee minutes.

In reviewing the documents, content analysis provided qualitative summaries and also helped quantify the contents objectively according to the established categories. All materials were analyzed and coded according to the research questions and the overarching concepts and key themes identified in the literature. These overarching concepts or themes were Total Quality Management/Continuous Quality Improvement, leadership, strategic planning, education and training, and organizational support systems. The research question themes were access, scope, financial and operational viability, quality and satisfaction. This process of coding the information according to the identified themes and research questions facilitated a critical review and discussion of the meta-analysis material and allowed a greater depth of understanding as to the effect of the
process and strategies used in the redesign and the outcomes achieved. Thematic analysis helped identify and clarify values, strategic directions and degree of congruence between goals and outcomes.

In this phase of content analysis the systematic, objective examination of the recorded information resulted in data reduction, data display, and conclusion verification. Data reduction consisted of a process to simplify and clarify the large amounts of available information. This was done in order to select the data most appropriate to address the specific research question for the study. The next step consisted of organizing the reduced data into concise focused data displays (tables and figures) to support the discussion and drawing of conclusions. This last step gave the data meaning, allowed comparison to the literature and provided verification and support for the conclusions drawn. The quantitative data display consisted of tables and figures that were used to supplement and support the text and provide clarity as to the changes and trends that were being discussed. Areas where this was most significant were:

- changes to the composition of the work force (distribution of staff across the union groups);
- impact of the changes on staff morale and satisfaction as reflected in use of sick time, use of employee support programs, and incident rates;
- effects of redesign on access and scope of services as reflected in the weighted cases and program volumes;
- effects of change strategies on quality as reflected in satisfaction surveys, results of external assessments, incidents and complaints; and
- cost effectiveness as reflected in cost per case and salary and benefits as a percentage of operating expense.

As indicated, the information obtained from this meta-analysis process was used to address the research questions:

1. What are the effects of Scarborough General Hospital’s organizational restructuring and process redesign initiatives on patient access to care and services, the scope of care and services provided by the hospital to its community, and the hospital’s financial and operational viability; and

2. How do changes to care and service delivery impact on the quality of care and services and satisfaction of patients and staff.

There is little consensus in the current literature as to what links organizational restructuring and work redesign initiatives with access, quality and satisfaction. This lack of critical discussion made investigation of these phenomena through a meta-analysis study design appropriate and useful. This study clearly identified the opportunity for future research using the meta-analysis approach to further investigate the impact of restructuring and redesign on patient care and with appropriate research design determine causality between changes and outcomes.
CHAPTER FOUR: RESULTS AND DISCUSSION

Overview

Scarborough General Hospital began to implement a major change initiative in 1994. The hospital undertook this project in response to reduced funding, the need to maintain levels of service with fewer beds, and the growing demands for a restructured health care delivery system. In retrospect, the hospital’s timing and approach was proactive and insightful. The components of Scarborough General Hospital’s change project successfully paralleled the key determinants of success as discussed in the literature. The hospital identified its vision, demonstrated leadership, followed a strategic plan, and through empowered employees achieved a significant degree of success in achieving its targeted objectives.

The overarching concepts of Total Quality Management/Continuous Quality Improvement, leadership, strategic planning, staff education and training, and organizational support systems were clearly evident in the hospital’s development and use of strategies to guide their change projects. The model of care chosen by the hospital was the patient centered care model and the organizational model was a hybrid of the traditional/functional, program management and matrix models. The outcomes achieved were a strengthened focus on patient care groupings (aggregations), a team or systems
approach to care and service delivery, and a balance of the economy of a centralized approach with the flexibility and speed of a decentralized approach.

SGH was moderately successful in achieving a collective sense of responsibility and creating a new culture to support the new paradigms that came as a part of such an extensive change initiative. The inability to successfully create a new culture and collective sense of responsibility was linked to the very aggressive time frames used for most of the change processes. In almost all cases, multiple changes were occurring at the same time with minimal additional resources to support the process. Empowerment, team collaboration, critical thinking, and achievement of best practice take time: time to learn, time to practice, and time to internalize. This time was not available due to pressures for change coming from the Health Services Restructuring Commission, the Ministry of Health, and the senior management team of the hospital.

While patients as priority, quality, and satisfaction may have been the altruistic themes for the change initiatives, the driver in most instances was in fact financial. The immediate need for cost reduction in order to maintain levels of service dictated the speed with which changes had to be accomplished and the cost saving targets that had to be met. Some groups felt disenfranchised by the new structures and the new processes. A few physicians in particular felt negatively impacted, as did many middle managers. The new organizational structure greatly decreased the number and levels of management and the new care delivery model put more emphasis on collaborative team practice than a physician driven model. Staff at the care-delivery level experienced significant workload
stress since patient volumes were maintained even though beds had been reduced by 26% between 1995/96 and 1997/98. Care delivery went uninterrupted while new skills were being learned, new roles implemented and new structures imposed. These job stress factors did not significantly impact on the hospital’s ability to achieve its objectives - it just took longer than anticipated, and in some instances, redesign of the initial change strategy was required.

Within an environment of change and uncertainty, the hospital faced the challenge and maintained a strong future as a major provider of hospital services to the community of east Toronto (formerly known as Scarborough). The Metropolitan Toronto Health Services Restructuring Report (July, 1997) confirmed that Scarborough General Hospital (SGH) would continue to be a key player in the Toronto health care system. This report directed that the SGH retain the bulk of its core services and identified the hospital as a regional centre for dialysis and magnetic resonance imaging (MRI).

The Canadian Council for Health Services Accreditation awarded the hospital a three-year accreditation award and the Ivey School of Business commended the hospital for being pro-active, innovative and strategically focused in their change initiatives. The summary report from the Canada Awards of Excellence also provided positive comments. It recognized the investment in training and development of staff and commended the high degree of involvement of staff in the change projects related to patient care.
Teams Empowered to Achieve Change

As discussed in the literature, the work of Hamel & Prahalad (1989), and Belasco & Stayer (1993) indicated that successful organizations are those organizations that have a clear vision of their preferred future, have well developed strategies for achieving that future and are results oriented and outcomes focused in their approach. Throughout the change project, Scarborough General Hospital was very clear in all of its documentation as to its intent. The mandate was to change the way in which it conducted business and to do this by achieving an organizational restructuring and process redesign that would be cost effective and efficient and would maintain the quality of care and services for which the hospital had become known. Scarborough General Hospital managed its extensive change process internally with minimal input from expert consultants. Through the use of empowered teams, credible leaders, and strong strategic direction, the hospital achieved many of its desired changes.

In order to discuss these achievements it is important to understand the processes and team structures used to accomplish them. The team structure and their mandates will be discussed in order to better evaluate the effectiveness of the outcomes as they apply to the research questions: 1. What are the effects of Scarborough General Hospital’s organizational restructuring and process redesign initiatives on patients’ access to care and services, the scope of care and services provided by the hospital to its community, and the hospital’s financial and operational viability. 2. How do changes to care and service
delivery models effect quality of care and services, and satisfaction of patients, staff and physicians?

In the hospital’s change documentation, leadership was identified using the work of Kouzes and Posner (1987) as the process of being able to positively influence staff to accomplish the changes required. As stated, consistent with the hospital’s past practice, there was very little use made of expert consultant help to plan and implement the changes. Instead, the hospital selected several key individuals to be leaders of the different change teams. These individuals were selected and groomed to take on this expanded responsibility: They were empowered to create a vision and make it a reality. The biggest challenge identified by these team leaders was how to create and maintain change teams that would be highly motivated, creative and empowered to make hard decisions over the long-term. They recognized this as being all the more difficult, since the work of the change teams was in addition to their regular work with minimal replacement and support available. It was clearly understood that the hospital must maintain a business-as-usual environment (regardless of what else might be occurring) and that success would have to be accomplished on a shoestring budget.

Fortunately, a series of focus groups identified the staffs’ desire to contribute to the planning and implementation of the change processes. This was supported by a strong commitment on the part of the hospital to involve as many front-line staff as possible as members of the working groups. Consistent with the views of Barker (1990) on participatory management, the hospital believed that employees that were going to be
impacted by the changes should have the opportunity to participate in the process. There was a clear expectation and support for staff to identify new ways of doing their work in their individual units and departments. This support was based on the recognition that the people actually providing the care and services were the best people to contribute and decide on the direction of the redesign.

A further involvement of staff occurred through the formation of staff advisory groups. Staff were informed that the hospital recognized streamlining of the organizational structure and care delivery processes would no doubt result in some loss of jobs but that every attempt would be made to ensure that movement and displacement of staff would occur in a fair and equitable manner. In setting the stage for change, the hospital gave a strong reminder that funding reductions, along with substantial change in the health care sector, would occur whether the hospital moved forward with its own initiatives or whether it chose to remain static and do nothing. The message communicated was that by being pro-active, the hospital was better prepared to make changes that could strengthen its long-term position. The hope was that by being visionary and taking the initiative, the hospital could minimize the negative impacts of this inevitable change process.

Staff were urged through articles in the Monitor (SGH’s newsletter), open meetings with the president, and unit/department meetings to participate by sharing their ideas. Their input on how services could be delivered in a more effective and efficient manner and how their jobs could be changed to improve and simplify the services they provided was seen as a key part of the change process. Staff were encouraged to support
the changes and, if things didn’t work out perfectly the first time, to provide feedback and share their suggestions to make it work better the next time. In spite of staff concerns that participation in this change process signified support and agreement for the changes, there was, overall, extremely good front-line-staff attendance at meetings and good input at focus groups. Staff clearly identified that they wanted to be involved in correcting some of the inefficiencies and non-productive tasks in their work environment.

The process of mobilizing the staff into effective groups to achieve the change objectives resulted in the formation of several key teams. Analysis of the multiple change teams revealed a very complex structure with mandates that often appeared to overlap. The communication process between the teams was sometimes complicated and the appearance of working at cross-purposes was created by the fact that each team had a different team leader. In retrospect, it would have been better to have a less complicated team structure - fewer parent teams and working groups with broader mandates responsible to these parent teams. A clearer overall systems design for the committee and team structure was required as well as a more formalized process for standardized data collection and reporting for the project components. A comprehensive structure was needed to align the individual change projects (of which there were many) with the strategic plan over the long term. The change teams lacked consistent evaluation methodologies, confirmed early in the project. There was a need to confirm what were the appropriate comparative referents or benchmarks that would allow assessment of
Scarborough General Hospital’s Goals for Change
* remain as a strong, viable acute care community hospital in east Toronto
* continue to provide quality patient care through a customer focus
* continue to show leadership in maintaining a fiscal responsible position

Strategies to Achieve Goals
* become a benchmark hospital for resource utilization
* increase the hospital’s market share/volume of cases
* develop a new patient care delivery model
* maintain strong strategic alliances
* implement a new organizational structure
* encourage an entrepreneurial approach to new business

Key Change Teams

1. Critical Success Factors Team – defined
* lead programs
* committees and working teams
* key initiatives
* scope of change
* planning framework (six strategies)

2. Transition Team – mandate
* to oversee the effective implementation of the change strategies and achieve desired goals

3. Clinical Resources Team – mandate
* achieve best performance in length of stay and day surgery
* increase service volumes in targeted areas
* develop alternatives to providing care in hospital

4. Patient Care Delivery Team – mandate
* streamline all processes in patient care delivery including the supporting tools (care plans, documentation, flow of information etc.)
* develop vision statements (service and process, human resource, technology etc.)

5. Organizational Effectiveness Team – mandate
* enhance involvement of medical staff and front line staff in strategic and operational issues
* develop a new organizational structure to support the new patient care delivery model
* ensure key supports (i.e. career resource centre, new committee structure etc.)

6. Human Resources Design Team – mandate
* Clinical and Non-clinical
* redesign the role and functions for clinical and service activities that support patient care (i.e. new roles, new staffing models)
* develop a human resource strategy to support change initiatives

7. Patient Aggregation Design Team – mandate
* determine appropriate patient groupings to ensure best use of resources

8. Technology Design Team – mandate
* develop a plan identifying technology enhancements required to support new organizational and patient care delivery models

9. Fast-track Teams/Other
* Admitting and Discharge
* Laboratory restructuring
* Documentation and Health Records
* Patient Service Associate (PSA)
* Emergency Services Planning

Figure 5 Represents the structure of the key teams used by Scarborough General Hospital to achieve its change initiatives.
outcomes at the completion of the change projects. The evaluation methodology was clearly one element that was poorly planned and remained problematic throughout the change process.

The key change teams (see Figure 5) were the critical success factors team, the transition team, the clinical resources team, the patient care delivery team, the organizational effectiveness team, the human resources and clinical and non-clinical design teams. Other teams with a more limited mandate and life span were the patient aggregation design team, the technology design team and the several fast-track teams.

The hospital’s goals for the change teams were clearly stated: remain as a strong, viable, acute care community hospital in east Toronto; continue to improve quality of care and service through a customer focus; and continue to show leadership in maintaining a fiscally responsible position. The preferred strategies to achieve these goals were identified: become a benchmark hospital for resource utilization; increase the hospital’s market share; develop a new care delivery model; maintain strong strategic alliances; implement a new organizational structure; and encourage an entrepreneurial approach to new business (see Figure 5).

In 1994, Scarborough General Hospital started its change process with a retreat. At this retreat, the board, senior management and middle management identified the factors they felt were necessary to achieve the targeted change, and called these factors the critical success factors. This term was used throughout the change project. The critical success factors team was formed and given the mandate to ensure a strong future
for SGH during a time of dramatic change, within an uncertain environment. In order to ensure successful achievement of these specific goals and strategic directions, the critical success factors (CSF’s) were defined by the hospital as the “skills or competencies that an organization must exhibit in order to sustain competitive advantage” (Scarborough General Hospital, Critical Success Factors, December 1994). These critical success factors were in fact very similar to the concept of core competencies as discussed in the literature. The critical success factors (CSF’s) identified by Scarborough General Hospital as being key to its success were continued service to meet community needs, demonstrating quality and appropriateness of services and programs, maintaining the lowest cost per case. Also included was maintaining a critical mass, and achieving recognition and a reputation within the health care community for innovativeness and high standards. Other CSF’s identified as being important were: strategic partnerships, current technology and facilities, up-to-date information management technology, an ability to be adaptive to emerging trends and, lastly, people development (retraining, redeployment, recruitment, and retention).

By initiating the critical success factors project in 1994, the hospital was pro-active and demonstrated strategic opportunism as described by Isenberg (1987). It was an example of the hospital’s ability to foresee and respond to a changing environment in a way that showed innovative leadership. To help put this timeframe into perspective, the Metro District Health Council did not begin its work until 1994 and the Health Services Restructuring Commission did not begin its restructuring work in Toronto until 1996.
The CSF project undertook a critical review of the internal organization as well as the external environment to determine what changes were needed. The review process, using the various fits as described by Kearns (1996), assessed the hospital’s current strengths as compared to the CSF’s and developed specific strategies to strengthen the hospital’s position for the future. The work of this team involved a steering committee composed of the president, three members of senior management, five physicians who were seen as champions of the change initiative, one management representative and the corporate planner. The committee members were to function as leaders for the project, maintain the vision, and empower staff to see it through to completion.

The CSF project consisted of three phases: Phase 1 consisted of an assessment and data gathering phase which identified a wide range of issues and opportunities that required analysis, clarification, and prioritization. This phase was closely linked with ensuring the hospital maintained appropriate access and scope of services for the community served. It looked at patient service groups in order to assess current patient services and identify key areas of focus in which the hospital should develop a distinct leadership role. The definition for a patient service group was the one developed by the Metropolitan Toronto District Health Council (1995). This definition described these service groups as an array of services, skills, technologies, and other resources provided by hospitals in response to the identified or anticipated needs of a specific group of patients.
Similar to the patient service groups as defined by the MTDHC, the patient service groups at SGH were divided into three distinct categories. An essential service was a category that represented a range of services directed at meeting the community's need for critical care and complex high-risk care. Key related services represented services with significant linkages and interdependencies to the essential services - ones that contributed to the overall continuity of patient care, and specialized and supporting services, were services that had fewer linkages to the essential services and had greater potential for realignment, consolidation or strategic partnerships. Scarborough General Hospital's role in providing emergency care was identified as its core business and therefore an essential service. This decision resulted in each SGH patient service cluster being assessed in terms of its relative importance to the core business. Emergency services, as the hospital's core business, was identified from the fact that this department serves an average of 60,000 patients annually (the second largest volume of all Metro hospitals) and on average 55% of the hospital's admissions come through the emergency department. To fulfill the hospital's role in emergency care, certain program and service linkages were required - namely, those required to meet the community's need for critical care and complex high risk care.

Phase I also included economic modeling and benchmarking. This resulted in the development of a 5-year economic (financial) model, and an assessment of operational and clinical data for benchmarking opportunities. It included a review of the health care system environment to understand the strategic issues and identify future opportunities for
alliances, partnerships and joint ventures with other health care providers. A review of the hospital’s organizational structure included an assessment to identify opportunities for a new organizational structure to support new patient care delivery processes. An assessment of the hospital’s information technology was completed in this phase to identify advances in technology that would enhance the hospital’s processes. The physical facilities assessment identified facility renewal requirements that led to the development of a new master plan (facility renewal plan). To ensure the skills for new directions and new services were in place, the final aspect of Phase I was the assessment of the people development component of change (retraining, redeployment, recruitment and retention). This assessment, once completed, identified the organization’s current strengths and future training needs.

Phase II focused on review of the strategic issues and opportunities identified in Phase I in order to select the hospital’s major areas for change in the upcoming years. This resulted in selection of strategies for implementation, and formed the basis for an updated strategic plan for the hospital (approved August 1995). Phase III involved development of the action plans and subsequent implementation teams to operationalize the new strategic directions.

Defining lead programs and key initiatives, although difficult to do, was a vital step in identifying areas of leadership for the hospital. By identifying essential services, key related services, and specialized and supporting services, clarity was brought to the hospital’s role in serving its community. The patient service group framework helped
focus the hospital’s energy and thinking in order to ensure that a leadership position in the strategically appropriate programs and services was achieved. Since resources were limited, the hospital’s decisions around resource allocations had to support its strategic directions, and had to target investments to meet the long-term vision. While the patient service group framework readily identified the key programs and services essential to the hospital’s role, it also helped clarify the linkages necessary to achieve increased efficiencies within the departments and units.

Having defined lead programs and key initiatives, another task of the critical success factors team was to define the committees and working groups required to achieve the various change initiatives: their membership, mandates, and time frames. As already indicated, this group’s responsibility was to identify key focus areas for change and opportunities for leadership, as well as to develop a framework for resource planning and allocation. The team developed a financial forecast for the next five years and a multi-year economic model with specific indicators of performance. In the process, they analyzed health policy directions, trends, and reforms to better position the hospital in a competitive way.

The hospital’s intent was that planned improvements, using a customer focus, would bring significant benefits through enhanced quality of outcomes, streamlining of processes, and higher patient satisfaction. This was consistent with Jirsch’s view of quality care as patient-centered (Jirsch, 1993). This view of quality required the hospital to focus on the match between the care requirements of the patient and the hospital’s ability to
meet those needs through appropriate use of resources. Achievement of this goal was supported through continued commitment of the hospital to its continuous quality improvement program (CQI). Using the CQI approach, staff members were actively involved in the continuous improvement of health care practices and service deliver. Maintaining quality during the change process meant ensuring qualified staff were available in all areas of service delivery. This placed added importance on the hospital’s need to maintain core competencies and promote continuous learning through ongoing education and training.

Situations, which are complex and uncertain, require a clear leadership plan, a plan that guides actions toward the accomplishment of desired goals (Deveau & McCabe, 1996; Majchrzak & Wang, 1996; Peregrine, 1997). At Scarborough General Hospital the strategic plan was the leadership plan; it established the priorities and set some indicators by which accomplishments could be evaluated. The hospital’s strategic plan identified six strategies that became the drivers for the hospital’s change process. The six strategies identified were: *best performance in utilization, innovation in patient care delivery, increased services in targeted areas, improved organizational effectiveness, strong strategic alliances, and new business focus*. It is important to note how similar these strategies are to the critical success factors (CSF’s) since they focused on performance, cost, quality, and utilization. Like its complex and overlapping change team/committee structure, the hospital should have developed a more streamlined planning document as part of the overall strategic planning structure. There needed to be one set of strategies,
referred to by one name, that could then be broken down into sub-components. This is a good example of a situation in which complexity and ambiguity added confusion and made the task of communication and co-ordination more difficult.

The hospital further defined the six strategies and developed a plan to achieve the desired outcomes. *Best performance in utilization* focused on improved departmental efficiencies, improved utilization of beds, and innovative approaches to patient care delivery. Detailed discussion of achievements occurs later, but examples include improvements to the length of stay and outpatient surgery rates. *Innovation in patient care delivery* focused on streamlining and redesigning the patient care processes with special attention to implementation of new service roles and creating an expanded role for registered nurses (RN’s) and registered practical nurses (RPN’s). *Increased services in targeted areas* focused on utilization of the hospital’s capacity to accommodate increased volumes of service in selected areas. The preliminary areas for increased services included areas where there was a high demand and long waiting period to access services, areas that had capacity to serve a broader referral base, and areas where the organization wanted to improve its critical mass. *Innovation in patient care delivery* was identified as beginning with the patient’s admission or registration and following through all phases of the patient’s stay including post-discharge. As stated, this included streamlining and improving several processes to reduce fragmentation of care, duplication of services, and delays in implementing care plans. The methods used by SGH to streamline and simplify the processes of care delivery followed the literature, and included the use of care
pathways, empowered interdisciplinary teams, job redesign to expand the scope of practice, and enhancement of information technology support.

*Improved organizational effectiveness* focused on changes in management practices - changes that enhanced decentralized decision making, increased the focus on team approaches, and facilitated innovation and risk taking. There was an increased emphasis on people and improvements in reward and recognition systems for both individual and team efforts, as well as supports for training and development. The hospital identified areas where *strong strategic alliances* in the form of linkages and partnerships with other organizations would be beneficial. These relationships were seen as a way of maximizing resources and enhancing the seamless delivery of care with reduced fragmentation across the care providers. The sixth strategy targeted *a new business focus*, and reflected the hospital’s commitment to finding new markets for its skills and services. The intent was to achieve a leading financial performance through increased volumes, increase in non-Ministry of Health revenue, and reduced costs through increased efficiencies.

The board retreat and the work of the critical success factors group confirmed the hospital’s strategic plan and reflected the hospital’s commitment to the change projects as a method to deal effectively with the issues of reduced funding, bed closures and health care restructuring. The hospital’s communications to staff clearly stated that the projects would mean significant change for the hospital, the beginning of a journey which, once
started, would allow no turning back, and once completed, would refocus the organization, restructure its workforce and redesign its processes.

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<td><strong>Our Customers</strong></td>
</tr>
<tr>
<td>Our customers are patients and their families or significant others.</td>
</tr>
<tr>
<td>Our partners include those groups that are not employees, but play an integral role in patient care, such as:</td>
</tr>
<tr>
<td>* internal and community physicians</td>
</tr>
<tr>
<td>* community agencies</td>
</tr>
<tr>
<td>* special interest groups and volunteers</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th><strong>Our Service Vision</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>* efficient effective utilization of resources</td>
</tr>
<tr>
<td>* maximized use of enabling technology</td>
</tr>
<tr>
<td>* value-driven decision making</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th><strong>Human Resource Vision</strong></th>
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</thead>
<tbody>
<tr>
<td>* expanded roles and broader skill sets</td>
</tr>
<tr>
<td>* self-directed, autonomous, accountable workforce</td>
</tr>
<tr>
<td>* computer literate/technology &quot;mind-set&quot;</td>
</tr>
<tr>
<td>* team skills, fewer providers, committed to excellence</td>
</tr>
<tr>
<td>* enhanced role for families, students, volunteers and other agencies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Our Customer Needs</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>* assistance/support in making the transition to assuming greater responsibility for self care</td>
</tr>
<tr>
<td>* provision of quality care with respect, dignity, and sensitivity</td>
</tr>
<tr>
<td>* easy access to care/services</td>
</tr>
<tr>
<td>* Individualized care</td>
</tr>
<tr>
<td>* timely and ongoing communication and information</td>
</tr>
<tr>
<td>* to be a partner in care planning and delivery</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th><strong>Our Process Vision</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>* patient-centered care</td>
</tr>
<tr>
<td>* patient aggregation (grouping similar patients together)</td>
</tr>
<tr>
<td>* increased continuity of care by reducing the number of service provider contacts</td>
</tr>
<tr>
<td>* increased use of multi-skilled workers</td>
</tr>
<tr>
<td>* increased team approach</td>
</tr>
<tr>
<td>* streamlined and simplified information and care processes</td>
</tr>
<tr>
<td>* cost-effective, less costly care processes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Technology Vision</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>* movement to a computerized record</td>
</tr>
<tr>
<td>* external/internal information linkages</td>
</tr>
<tr>
<td>* technologies to increase quality and optimize resource management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Measurement and Evaluation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>* evidence/data-based decision making</td>
</tr>
<tr>
<td>* simplified user friendly information</td>
</tr>
<tr>
<td>* ability to measure and evaluate &quot;value&quot;</td>
</tr>
<tr>
<td>* measurement and evaluation to support decision making</td>
</tr>
</tbody>
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Figure 6 Scarborough General Hospital’s vision statement framework for its change initiatives.

Once the scope of change had been defined, the overall process to achieve it was guided by the transition team and several supporting change teams. The transition team
was given the mandate to oversee the effective implementation of the change strategies and to achieve the goals set out in the strategic plan.

The mandate of the clinical resource management team was to identify appropriate methods to achieve best performance in length of stay, increase volumes in targeted areas and develop alternatives to hospital care. This team was responsible for guiding the introduction of care pathways into several patient care areas. The initial diagnostic categories selected were stroke, acute myocardial infarction, hip replacement and abdominal hysterectomy. The goal was to streamline care planning, improve management of the full episode of care, reduce the length of stay, improve patient outcomes, and achieve a more standardized approach to care delivery throughout the hospital.

The patient care delivery team was responsible for examining every dimension of processes involved in the delivery of patient care. Their mandate was to guide the strategies to achieve desired changes in processes, roles, and technologies. This included the development of new documentation methods, improved information flow, and more efficient utilization of staff. Examination of appropriate patient groups (aggregates) to better match patient needs with resources was also part of their mandate. This team developed guiding parameters to be used throughout the change projects. These parameters included: patients are priority and all change efforts must provide value in services to the patients; the work of all change teams must involve medical staff,
management, and front-line staff; and there must be timely and regular communication of the directions and progress of the different change initiatives.

This team also determined that education on change management would be provided to managers, staff, and medical staff and education to staff would include training for new skills and new roles. Where necessary, they agreed that deployment of staff would occur in a fair and equitable manner. They also established a work-plan composed of four major phases: assessment, visioning, redesign, and implementation. The team examined the patient care delivery processes in order to streamline them, enhance the use of supporting tools, and address changing patient needs while meeting fiscal targets. The assessment phase included charting the current processes for patient care delivery, comparing process information from other hospitals, and conducting patient and provider interviews /focus groups to understand the perspectives of each group. This information was then used to identify desired changes to the patient care delivery process as well as the process supports required to achieve the targeted outcomes. The visioning phase (see Figure 6) involved several sessions and resulted in the development of the selected criteria for a new patient care delivery model for Scarborough General Hospital.

The new patient care delivery model adopted by SGH was the patient centered care model. Key components of this model as described in the literature (Eni, 1994; Anderson, 1993; O’Malley & Serpico-Thompson, 1992; Robinson, 1991; Sherer, 1994; Sherer, 1993b) included: better co-ordination of care, improved communications, use of cross-functional teams, empowered staff, use of multi-skilled workers, decentralized
decision making, and aggregation of like patients (see Figure 1). For Scarborough General Hospital, selection of this model resulted in a decentralization of services such as phlebotomy and intravenous starts, cross training of staff with broader job roles (PSA role), and a focus on teams with an emphasis on interdisciplinary collaboration. It also included the use of care pathways to improve length of stay and quality of outcomes. The final component of the patient centered model was the promotion of shared values which emphasized enhanced patient participation and responsibility, enhanced employee responsibility and autonomy, and a corporate culture of excellence. It provided support for creativity and innovation, and internal and external recognition of excellence. A service vision and a process vision were identified. The service vision was efficient and effective utilization of resources with maximized use of enabling technology, and value driven decision-making. The process vision was identified as patient-centered care that involved patient aggregation (grouping similar patients together) and increased continuity of care by reducing the number of different service providers the patient came in contact with. It also involved increased use of multi-skilled workers, team or interdisciplinary approaches and, finally, streamlined and simplified information and care delivery processes.

The scope of the patient care delivery team was quite complex. As indicated, they identified parameters for the hospital’s customers and their needs, the service and process vision, the human resources model and technology characteristics and also suggested measurement and evaluation requirements. The complexity becomes apparent in the three additional supporting visions that were developed by this group. The human resource
vision involved: expanded roles and broader skill sets for staff; development of a self-directed, autonomous, accountable work force; achievement of a computer literate/technology mind-set, enhanced team skills; fewer providers; and a commitment to excellence. As well, this vision included an enhanced role for volunteers, families, students, and other agencies. The technology vision identified the need to achieve a computerized health record, develop internal and external information linkages and networks, and acquire technologies to increase quality and optimize resource management. The measurement and evaluation vision mandated a move towards evidence/data-based decision-making. It required a simple, user-friendly, information system and technological capacity to measure and evaluate the quality of outcomes.

Two of the change teams that were not as successful in achieving their mandates as the others were the strategic alliances change team and the financial performance change team. The strategic alliances change team was responsible for the development of strategic alliances and business relationships that were perceived as having the potential to better position SGH to achieve its goals. This team was to identify potential partnerships with other care providers or service agencies and develop agreements that would add value to the hospital’s patient care process by increasing the continuity of care and provide cost savings where possible. This team experienced difficulty in meeting its mandate and was only successful in providing a list of current partnerships and a second list identifying organizations where future agreements would be beneficial. No new partnerships resulted
from the work of this group. New partnerships were later achieved through the efforts of the senior management team.

The financial performance change team was given the mandate to develop strategies related to short term opportunities for improvement in departmental efficiencies based on operational benchmarking. They were to explore opportunities for enhancing revenues and identifying new non-Ministry of Health revenue sources. While the hospital did make significant achievements in these areas, it came much later in the change process and resulted from the work of the new divisional directors as opposed to the work of this change team. The lack of success in these two teams may have been due to the leadership or followership characteristics of the groups but it may also have been an example of the wrong timing or phasing of these activities within the overall time frames of the change project. The attempt was made too early in the process to be effective and was positioned too low within the organizational hierarchy to be successful.

The final change team was the organizational effectiveness change team. The mandate of this team was to determine what organizational changes were required to implement the hospital’s mission, vision, and corporate goals. The focus of this team was on the new organizational structure and included other key support initiatives required to support a new structure. These included a career resource centre, a revised performance appraisal mechanism, and an appropriate committee structure for the new organization. This group was also given the responsibility for enhancing the involvement of the medical staff and the front-line staff in strategic and operational issues. As stated, their task was to
develop a new organizational structure to support the new processes of patient care
delivery and the model they chose was a hybrid model of the traditional/functional,
program management and matrix models.

In addition to the key change teams, several design teams were formed to
complete the detailed design work necessary to accomplish the targeted changes. The
membership of these design teams included front-line staff with the knowledge of the
patient care delivery processes requiring significant change. *The human resources -
clinical and non-clinical design team* had the mandate to redesign the roles and functions
for clinical activities as well as the services that support patient care delivery. They
developed new roles and staffing models and defined the scope, functions, and skill
requirements to achieve the changes proposed. Their work resulted in expanded scope of
practice for the registered nurse (RN), the registered practical nurse (RPN), and a new
role of patient service associate (PSA). There was significant transfer of job functions
between the various roles and a collapsing of the number of job categories in the hospital.
The results achieved were consistent with the literature (Lanthrop, 1991; Robinson, 1991;
Sherer, 1993b; Rudd, 1994): improved utilization of the expert clinical staff through
appropriate transfer of support functions to the less qualified staff. These support
functions included making up of discharge beds, portering of patients for tests, delivering
lab tests, stocking supplies, and searching for equipment. The expanded roles, plus transfer
of functions, brought the expert nursing staff closer to the bedside and helped decrease the
number and categories of staff a patient had to encounter during the course of treatment.
Redesign and training facilitated improved communication between staff, improved coordination and management of all aspects of patient care, and empowered staff to assume ownership and responsibility for the work they did.

The patient aggregation design team determined the appropriate groupings of patients to ensure the most efficient and effective use of resources. The new patient aggregations included a grouping of orthopaedics with rehabilitation, and acute neurology with stroke rehabilitation. The outcomes were better continuity of care and shorter lengths of stay for these patient groups. In addition, cross training of staff within these patient aggregations resulted in a more flexible staff who could work in either specialty area thus allowing flexible staffing patterns to meet fluctuating patient census and workload.

The technology design team was responsible for the development of a plan for technology enhancements required to streamline the patient care processes and move the hospital towards an electronic patient record. It involved review of on-line documentation capabilities, bedside technology, linkages with physician’s offices and on-line ordering and results reporting. It also required development of a comprehensive training program to bring staff to a level of computer literacy compatible with the level of systems being implemented.

In addition to the teams already described, two fast-track teams were formed to address specific areas of change. These were areas in which the organization had identified an immediate need for change and where there was a sense that change could be achieved quickly and successfully. It was hoped that by sharing these early successes with the
organization, they could be used to motivate staff that the change process did work and results were beneficial to both staff and patients.

The first fast track team was the admitting and discharge team. This team examined the process flow of patients from admission through to discharge in order to identify opportunities to simplify these processes with an emphasis on customer needs. The streamlining of patient registration, patient billing and patient discharge were the main goals of this team. The results of this team’s efforts were the implementation of satellite registration areas, reduced waiting times for patients, increased accuracy of data collection, credit card imprints on admission, up-front billing and an express discharge process similar to the one used in commercial hotels. The pre-registration for morning admission patients saved patient time, allowed them to bypass the admitting department and go directly to the ambulatory procedure unit on the day of their surgery. This streamlined process allowed patients to pay for any flat line service charges such as their telephone before being admitted. Insurance coverage verification before admission enabled the hospital to place patients in the appropriate accommodations resulting in improved revenue for the hospital. Development of the pre-admission service passport speeded up the patient’s pre-admission visit and ensured a pleasant pre-admission experience through increased efficiencies in the flow of the process. The satellite obstetrical registration and accounts services office provided a quick and efficient process allowing patients to be dealt with directly on the unit, eliminating the need to go to a separate department to settle their accounts before leaving the hospital. The operating savings for this change initiative
were $303,648 in 1996/97, $364,182 in 1997/98 and an additional one-time saving of $72,179 in 1997/98. These process improvements had a positive impact on patient access and satisfaction with the quality of services provided.

The second fast track team was the documentation and health records team. This team examined the range of processes related to documentation including how health records were compiled and processed at discharge. The team’s focus was on developing a documentation system that eliminated unnecessary patient care charting, improved information sharing amongst the interdisciplinary team members, and facilitated processing of the health record at discharge. The long-term goal was to move towards a future computerized health record and to improve the use of technology to support patient care redesign, which included bedside data entry. The results of this team’s efforts were implementation of documentation by exception as described in the literature, as well as a co-ordinated interdisciplinary care plan that combined assessment information, problem statements, interventions, and outcomes. These changes allowed a more streamlined approach to documentation and eliminated individual discipline-specific assessment forms, care plans and other documentation forms. This common patient-information database helped reduce duplicate information gathering and documentation. In one example, it reduced the time required for documentation of patient assessments by physiotherapists by 30 percent (audit verified). An external review of the health records department was completed. The results were a process redesign to address the scope of services provided by the health records department, a streamlining of records processing, a reduction of
cycle times to process records, and a revision in the numbers and skill mix of staff. The work of this team was viewed as having resulted in a positive impact on access, quality, and cost of the services reviewed.

Another significant change team initiative was the *laboratory restructuring project team*. This project involved the restructuring of laboratory functions and work processes and resulted in the formation of a core lab for Scarborough General Hospital where the most commonly ordered tests with fast response times (less than two hours) would be handled. As well, the laboratory staff were cross-trained to do a broad range of testing - becoming generalists rather than specialists. Within this project, non-core laboratory work would be sent to the newly formed regional shared laboratory, a partnership arrangement that included Scarborough General Hospital, North York General Hospital and Scarborough Grace Hospital, which opened February 15, 1997. This opening marked the successful achievement of the group’s mandate and resulted in annual savings of $682,323 in 1997/98 for Scarborough General Hospital. The effect on service for the SGH’s was faster response times, improved access to services, and decreased operating costs.

The *patient service associate project (PSA) team* was another very important change team initiative. This team was responsible for the development and implementation of the new multi-skilling role that combined a number of support services positions. The new PSA position was viewed as a key component to support the new patient care delivery team. It combined the functions of housekeeping, portering, meal delivery, and supplies management into one position. The full implementation or rollout of the plan was
accomplished and involved the training of over 80 employees. At the completion of the project, PSA’s completed a standardized job diagnostic survey that was compared against the average service worker ratings for the same questions. PSA ratings were slightly more positive than those for the average service worker, which was interpreted as a positive indicator of job enrichment. Absenteeism for this group was reduced by 26% in 1997/98. Annual financial savings associated with the project are just over $100,000. Such elements of patient care redesign as broader job definitions, increased interdisciplinary collaboration, and enhanced employee participation and responsibility were achieved through the introduction of the PSA role. This role improved the hospital’s ability to maintain service volumes within a reduced budget, provided services closer to the patient, and required the patient to be exposed to far fewer providers than in the previous system.

A final change team initiative was the emergency services planning task force. This group reviewed the current department structure and function, and recommended a new physical location for the emergency department. The recommendations included a layout that would facilitate patient flow and care delivery as well as revised processes that would reduce waiting times and would accommodate increased volumes of patients. Since emergency services were identified by the hospital as its core business, the focus for change and improvement centered on the development of new triage protocols and improved patient flow through the department. It also included a new master plan for major renovations, implementation of new technology, and development of new staff roles consistent with the changing focus of the department. Role enhancement included allowing
registered nurses to do advanced triage. This required delegation of authority to the
registered nurses to order lab work and other diagnostics through the use of written
medical directives. The results would be that patients could be seen faster, medical and
nursing resources would be used more efficiently, and satisfaction for patients and staff
would be increased.

**Evaluating the Effectiveness of the Change Process**

The following discussion provides a critical analysis of the hospital’s actual
achievements using the longitudinal data elements identified in the methodology section
and applying them to the research questions for this study. Because no manipulation of the
data elements or the report materials was undertaken, the influence of the researcher on
the reporting of the outcomes and achievements was objective and non-biased. The data
and recorded comments provided the factual objective information and statements upon
which the reporting and conclusions were based.

**Meeting Identified Needs for Change**

Driven by the increased emphasis on alternative forms of care delivery that
required new and innovative organizational structures and patient care delivery models,
SGH changed its traditional hierarchical organizational structure. In June 1996, a new
organizational model was implemented. This new organizational structure was consistent
with the findings in the literature which stressed the need for a shared leadership model which decentralized decision making to the service or divisional units, an emphasis on multi-disciplinary cross-functional teams, and allocation of resources based on the needs of specific groups of patients. Unlike SGH's previous structures, where physicians had traditionally been excluded from the actual management of the hospital, the new structure used a co-leadership model (physicians and administrative/clinical dyad teams) to lead the newly formed divisions. Increased physician involvement in planning and decision making became a key component of the new structure, physicians were now part of the new corporate team (the senior leadership committee) and shared responsibility for planning and decision making at this level as well as at the new divisional level. The new medical advisory committee (MAC) included the new physician leaders/medical directors.

The outcome of the new structure was an organizational alignment with the strategic goals and patient care redesign objectives. There was also enhanced communication and interdependence between the various systems. The senior management team was reduced from five vice presidents to three, with each vice president responsible for some patient-care areas as well as some support functions. This was a change from the old structure where all of the patient-care areas reported to one vice president. As well, the management numbers were greatly reduced, especially in the area of nursing managers that went from 25 to 5. A far greater emphasis was placed on self-directed multi-disciplinary teams with an increased requirement for leadership and empowerment of staff at all levels. For many staff this was a welcome change and was viewed as an opportunity,
but for others it created a great deal of stress and anxiety. The level of supervision was greatly decreased and the accountability for results was moved lower down in the organization.

Effects of Change on Access and Scope of Services:

Since its establishment in 1956 by the Sisters of Misericorde, Scarborough General Hospital has provided a broad range of inpatient, ambulatory, and community services to one of the largest high-need communities in east Toronto (Socio-Demographic Needs Index, MTDHC Hospital Restructuring Project, 1995). The hospital primarily serves the residents of east Toronto (formerly known as Scarborough). Catchment area analysis shows that 40-50% of the local area population receives services at the hospital; approximately 80% of the hospital’s inpatients are Scarborough residents with some inflow from Durham. The hospital serves as a referral centre for vascular surgery, pacemaker implants, corneal transplants, and tertiary musculoskeletal services and continues to have the largest volume of tertiary cases of all the east Toronto community hospitals. In the March 1997 Toronto Health Services Restructuring Commission report, SGH was designated as a new regional Dialysis Centre as well as the new regional magnetic resonance imaging (MRI) site. These directions were confirmed in the HSRC’s July, 1997 report and final directions for Metropolitan Toronto hospitals.
As previously stated, decreased funding for Scarborough General Hospital resulted in the need to reduce beds (see Table 1). The hospital’s total number of beds were reduced by 26% from 521 beds in 1995/96 to 437 beds in 1996/97, and 387 beds in 1997/98. The areas most impacted by the bed reductions were: the surgical areas with a 22% reduction, the medical areas with a 27% reduction, rehabilitation with a 33% reduction, and continuing care with a 60% reduction. The HSRC’s final designation of 305 beds for SGH by the year 2003 (HSRC Report, July 1997) represents a total decrease of 37.6% or 196 beds (1995/96 to 2003). In spite of this significant reduction in inpatient beds, it will be demonstrated that Scarborough General Hospital has continued to maintain its service volumes through the results of the change initiatives.

The hospital has maintained an overall average occupancy rate of 86% and acute patient days that continue to be higher than its peer group. Concern about patient access to services and the need to use inpatient beds as efficiently as possible resulted in many new initiatives to improve or maintain appropriate access. Initiatives such as the creation of the clinical day unit, the after hours clinic, and the morning admission program were all focused on eliminating unnecessary admissions and unnecessary bed utilization.

Many services were now provided as outpatient services, including a shift from inpatient to outpatient surgery in selected areas. As beds decreased, indicators such as the number of weighted cases, length of stay, cost per case, readmission rates, wait times and canceled elective surgery cases were regularly tracked and benchmarked against top-
performing healthcare facilities. This was done to ensure appropriate access to service was being maintained and problems were identified so corrective actions could be taken.

Table 1
Bed Reduction Summary

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<thead>
<tr>
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<tbody>
<tr>
<td>Medical</td>
<td>to be determined</td>
<td>128</td>
<td>143</td>
<td>164</td>
</tr>
<tr>
<td>Surgical</td>
<td>to be determined</td>
<td>106</td>
<td>120</td>
<td>149</td>
</tr>
<tr>
<td>Palliative</td>
<td>0</td>
<td>10</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total Medical &amp; Surgical Beds</strong></td>
<td>to be determined</td>
<td><strong>244</strong></td>
<td><strong>272</strong></td>
<td><strong>322</strong></td>
</tr>
<tr>
<td>Obstetrics</td>
<td>to be determined</td>
<td>16</td>
<td>16</td>
<td>24</td>
</tr>
<tr>
<td>Critical Care</td>
<td>to be determined</td>
<td>24</td>
<td>26</td>
<td>28</td>
</tr>
<tr>
<td>Mental Health</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Paediatrics</td>
<td>0</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total Acute Care Beds</strong></td>
<td>279</td>
<td><strong>339</strong></td>
<td><strong>369</strong></td>
<td><strong>429</strong></td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>26</td>
<td>28</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>Continuing Care</td>
<td>0</td>
<td>20</td>
<td>26</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total SGH Beds</strong></td>
<td><strong>305</strong></td>
<td><strong>387</strong></td>
<td><strong>437</strong></td>
<td><strong>521</strong></td>
</tr>
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Source: Ministry of Health and Scarborough General Hospital Operational Plans

As indicated in Table 2, Scarborough General Hospital continued to have the highest number of separations, patient days, weighted cases, and average resource intensity weight (RIW’s) of all of the east Toronto hospitals. This is especially significant in view of SGH’s 26.7% bed reduction experienced during the time frame of the study - 1995/96 to 1997/98 (see Table 1). This significant downsizing of the organization’s acute beds was accomplished using a variety of strategies. In medicine this was achieved by
implementing patient aggregations in order to improve continuity of care and cross training of staff. As well, a community geriatric outreach program was established, targeting three long-term care facilities with high referral admission volumes in order to pro-actively decrease the number of admissions to Scarborough General Hospital from these facilities. Social work services were expanded in the emergency department in order to better link patients to home care services and reduce inappropriate social admissions, thus promoting more efficient use of the remaining acute care beds.

In surgery, the aggressive shift of services from inpatient to outpatient, as well as the use of care pathways to reduce length of stay, allowed volumes to be maintained in spite of decreased bed numbers (see Table 2). Improved bed utilization was also accomplished through participation in InterQual’s Intensity of Service, Severity of Illness and Discharge Screens for Acute Care (ISD-AC). This project used the ISD-AC tool to audit patient stays to determine whether they were appropriate for an acute bed at admission and each subsequent day of their stay. Patients that were deemed inappropriate were flagged and discussed with the attending physician in order to achieve more appropriate placement and services.

Health policy directions in Ontario have been moving hospitals to a more focused role in terms of the care provided for chronic/continuing care patients - specifically patients with complex and often unstable clinical conditions. The number of Scarborough General Hospital acute care patients requiring hospital-based chronic care has become very low, approximately two to three patients per year, so the hospital’s chronic care
program now targets patients with more complex needs such as those requiring chronic ventilator support. As of February 1998, the hospital currently accommodates three to four ventilator-dependent patients at a time, as well as selected complex chronic palliative care patients. This service was reviewed by the HSRC and the directions to SGH (July 1997) included closing of its 20 complex-continuing care beds and 10 palliative beds (see Table 1).

SGH's oncology services are another program in which the hospital is committed to meeting the identified needs of the community. This program has demonstrated the ability to be dynamic, to evolve, and expand to include new and emerging trends in care delivery and treatment options. Scarborough General Hospital operates an oncology clinic three days per week and in 1996/97 handled over 5,000 visits. This clinic will begin operating five days per week starting March 1998 in response to the growing demand for these services. The oncology clinic offers interdisciplinary team services that include patient assessment by oncologists and specially trained nurses certified in oncology care. Chemotherapy is administered in the clinic and as part of a comprehensive approach to providing care, patients and their family members are provided with medication counseling related both to the chemotherapeutic agents they are receiving and the other medications they are taking. As part of the cross-functional team, both nurses and pharmacists participate in the patient teaching sessions.

The holistic, patient-centered approach to care includes pain and other-symptoms assessment and management in this outpatient setting by physicians, nurse clinicians, and
staff nurses. Patients and their family members attending this clinic have access to all of the services provided by the hospital, including dental services, social work, dietetics, and chaplaincy. As an additional support, the Palliative at Home Care Team (PACT) is a community-based approach to providing palliative care. Patients are referred to home care and are followed by the PACT physician who has been specially trained in palliative care medicine. The PACT physicians make home visits to assess patients, manage their pain and other symptoms, and provide support to the families. There is also a 24-hour hotline that is staffed by the palliative care unit nursing staff and provides support to patients and families. The PACT program is another innovative program that ensures efficient, effective quality services are provided and that patients have the option to spend their final days in the comfort of their own home, if they chose to. The PACT Team has carried an average caseload of over 135 patients annually for over the past three years with patients remaining on this program for an average of 73 days. It has been another way in which the hospital has enhanced effective bed utilization.

Access to dialysis services has been a long-standing need for the Scarborough community. Senior management initiated a dialysis needs assessment, which was completed in 1995. This assessment revealed that Scarborough was comprised of more that 25% visible minorities with a high proportion of South Asian, Chinese, Guyanese and African immigrants. These groups have been shown to experience a higher incidence of renal disease, and often delay seeking medical treatment. In addition, almost 1000 Scarborough residents were waiting access to dialysis treatment, and patients in greatest
need often remained as long as 12 weeks in SGH before admission to a designated dialysis program. The unavailability of dialysis services resulted in significant health deterioration and high levels of anxiety to the patient. Upon admission to the dialysis program, patients traveled between 45 and 120 minutes to access this life saving treatment at downtown hospitals, adding an additional burden to the patient and their family.

Senior management committed to dialysis as a strategic initiative, and submitted a proposal to the Ministry of Health outlining the needs of Scarborough residents. In December 1995, the hospital was selected to be the site of a regional dialysis program and in September 1996, the program opened in a temporary location with six stations. Between September 1996 and March 31, 1997, patient numbers have increased to 150 (included hemodialysis and peritoneal dialysis). Most recently the Health Services Restructuring Commission directed that Scarborough General Hospital's dialysis program be expanded to absorb 40% of the Wellesley Hospital's dialysis services when that facility closes. Scarborough General Hospital's permanent new state-of-the-art dialysis unit opened April 14, 1997 and consists of 19 stations including two isolation stations. These 19 stations have the potential to expand the program to 114 in-centre hemodialysis patients. The end stage renal disease (ESRD) population has access to SGH's broad range of medical/surgical services, rehabilitation, and continuing care services and the hospital's formal alliance with St. Michael's Hospital will ensure access to additional specialized services for all ESRD patients. As of March 31, 1998 there were a total of 130 haemodialysis and 43 peritoneal dialysis patients receiving treatment at SGH. Even with
the significant expansion of the program, the need is still greater than the ability to provide services.

Table 2
East Toronto Acute Care Summary 1995/96

<table>
<thead>
<tr>
<th>East Toronto Hospitals</th>
<th>Separations % (Discharges)</th>
<th>Pt. Days %</th>
<th>Weighted Cases %</th>
<th>Average RIW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centenary Health Centre</td>
<td>19,563</td>
<td>96,728</td>
<td>23.4%</td>
<td>21,895</td>
</tr>
<tr>
<td>Salvation Army Scarb. Grace</td>
<td>13,291</td>
<td>64,401</td>
<td>15.5%</td>
<td>13,333</td>
</tr>
<tr>
<td>Scarborough General</td>
<td>22,587</td>
<td>133,623</td>
<td>32.3%</td>
<td>28,184</td>
</tr>
<tr>
<td>Toronto East General</td>
<td>21,018</td>
<td>119,377</td>
<td>28.8%</td>
<td>25,574</td>
</tr>
</tbody>
</table>

| East Toronto Grand Total         | 76,459                      | 414,129    | 88,985.24        | 1.16         |

Source: Health Services Restructuring Commission Restructuring Report - Appendix A: Excludes: Stillbirths

Another area where SGH will be expanding its scope of services is in relation to the July 1997 Health Services Restructuring Committee’s Metropolitan Report, in which Scarborough General Hospital was directed to proceed with the implementation of a regional Magnetic Resonance Imaging (MRI) program. Renovations and capital equipment acquisition are slated to be completed for a cost of over $3,000,000.

As indicated, Scarborough General Hospital continues to provide a major portion of the health care services in the east Toronto acute care sector which includes (according to the Health Services Restructuring Commission) Centenary Health Center, Salvation Army Scarborough Grace Hospital, Scarborough General Hospital, and Toronto East General Hospital. As indicated in Table 2, the Health Service Restructuring Commission reported that Scarborough General Hospital accounted for 29.5% (22,587) of the acute separations or discharges, 32.3% (133,623) of the total patient days, and 31.7% (28,184)
of the weighted cases for the four east Toronto hospitals for the 1995/96 period. This trend has been consistent over the years and is reflected in the 1996 and 1997 activity levels of the hospital as compared to its peers in east Toronto.

In the area of hip and knee replacements and pacemaker implants, Scarborough General Hospital has maintained patient volumes comparable to the larger Toronto teaching centres. In 1996/1997 SGH performed 330 joint replacements, which was lower than normal due to the Ontario Medical Association’s job action (involved withdrawing of non-essential medical services). The 1997/1998 volumes have returned to historical levels of approximately 400 cases, which as stated, is a number comparable to major teaching hospitals. The pacemaker volumes for the hospital have increased from 136 cases in 1992/93 to 212 cases in 1996/97 and 300 in 1997/98. Scarborough General Hospital now has one of the highest volumes of pacemaker implants for a community hospital in its peer group and takes referrals from Durham and York region as well as from other Toronto hospitals. Inpatient volumes in these two areas show trends consistent with the hospital’s strategic plan that targeted orthopaedic and pacemaker implants as desired areas for growth.

SGH’s acute care volumes (see Table 3) remained stable and have reflected the hospital’s planned shift from inpatient surgery to day surgery. Occupancy rates vary by service, but remain steady at an overall average of 86%. The average daily census reflected the decreased number of beds available. The number of deliveries from April 1997 to January 31 1998 has increased to 2,568 for this ten-month period. Scarborough
General Hospital has been able to maintain its critical mass/service volumes in spite of the bed closures through the improved use of technology, its new patient centered care approach and aggressive utilization targets.

However, faced with the HSRC’s demand for further reductions of acute care beds (30 paediatric inpatient beds with a shift to a 24 hour observation unit and outpatient ambulatory programs, 10 palliative care beds, plus 20 continuing care beds), the hospital will be severely challenged to maintain its present scope and volume of services.

### Table 3
**Inpatient Acute Care Volumes**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Weighted Cases</td>
<td>25,891*</td>
<td>28,184</td>
<td>28,699</td>
</tr>
<tr>
<td>Inpatient Volumes</td>
<td>19,694</td>
<td>22,587</td>
<td>24,416</td>
</tr>
<tr>
<td>Same Day Cases</td>
<td>11,500</td>
<td>9,982</td>
<td>11,272</td>
</tr>
<tr>
<td>Total Elective Surgical Cases</td>
<td>13,272**</td>
<td>14,172</td>
<td>14,004</td>
</tr>
<tr>
<td>Average Acute Daily Census</td>
<td>304***</td>
<td>338</td>
<td>347</td>
</tr>
<tr>
<td>Total Newborn Admissions</td>
<td>2,148*</td>
<td>2,268</td>
<td>2,772</td>
</tr>
</tbody>
</table>

Source: Canadian Institute for Health Information (CIHI)

Note:

* Some reduction in weighted cases and newborn admissions can be attributed to a combination of the physician job action and three vacancies in obstetrics and gynecology during this period. The number of deliveries for 1997/98 totaled 2,600 signifying a return to higher volumes. Since the job action impacted all hospitals, SGH’s volumes remain high as compared to its peer hospitals in east Toronto.

** Reduction in elective surgical cases reflects the shift to day surgery with the resulting increase of same day cases. 1997/98 statistics show 80% of SGH’s surgery is now day surgery.

*** Reduction in average daily census can be attributed to reduction in acute care bed numbers.

It is imperative that the hospital continue to pursue “out-of-the-box thinking and stretch goals” to ensure its ability to pro-actively meet the challenges of the restructured
health care environment. Further improvement in length of stay, greater shifts to day surgery, better use of technology that supports service efficiencies and continued development of process improvements that adhere to the hospital's patient centered care approach are all required if the hospital is to maintain current service levels.

Service delivery (critical mass) in the non-acute areas (see Table 4) reflects the hospitals chosen strategic directions. Rehabilitation volumes increased while the average length of stay (ALOS) decreased significantly allowing more rehab patients to be cared for using fewer beds. This was a direct result of the new patient aggregation which provided for a more seamless delivery of services throughout the patient’s acute phase and rehab phase that resulted in fewer delays, better communication, and increased efficiencies. The use of care pathways mapped out the patient’s anticipated progress and helped achieve expected outcomes within specified time frames. Pathways used interdisciplinary teams empowered to make decisions that ensured effective co-ordination of care and efficient use of resources.

Table 4 indicates how SGH’s chronic/respite in-patient volumes decreased along with the amount of time SGH rehab patients spent waiting in an acute care bed for transfer. However, the time SGH patients had to wait for placement in either chronic or nursing home facilities increased. This increase in time required to place patients in nursing homes and chronic care facilities was a result of the new placement process implemented in 1996 by the Ministry of Health. This placement process mandated the use of central placement coordinators, increased the amount of paperwork significantly and added
several new steps to the placement process. Because of the system's inefficiencies and its inability to streamline the placement process, it was replaced in 1997 with the Community Care Access Centres (CCAC's). The CCAC's have not been in place long enough to evaluate their effectiveness at this time, so it is difficult to predict how they will impact on the hospital's ability to appropriately place patients.

The increased rehab volumes, decrease in length of stay, and decreased chronic/respite volumes were consistent with the hospital's chosen strategic direction and the HSRC's 1997 directions. Efficient bed utilization ensured the hospital was able to use its acute care beds to the maximum. This efficiency was achieved by ensuring that the right type of patient was in the right type of bed and designing services to meet the patient's specific care and treatment requirements in a timely and efficient manner. The new process redesign also effectively addressed an issue often referred to as bed-blockers. This term refers to patients who do not require the services associated with an acute care bed and are blocking the bed simply because there is nowhere else to place them. Bed blocking can also result from inefficient care processes. This occurs when care has not been planned or co-ordinated appropriately to achieve efficient use of resources and, as a result, outcomes necessary to meet discharge within the targeted length of stay are not achieved. The discharge of the patient is postponed due to avoidable delays in service delivery.

Scarborough General Hospital has maintained a history of innovation in clinical practice and has been the first community hospital to introduce many new surgical technologies such as lasers, laparoscopy and microwave techniques. The hospital's shift to
day surgery has been due mainly to this improved use of technology. One example is the use of laproscopic surgery which allows procedures such as colycystectomy and transurethral prostatectectomy to be done as day surgery procedures where previously the patient would have required an average length of stay of seven days as an inpatient. The use of extended recovery room hours has also increased the number of patients who can be adequately recovered and discharged on the same day. Critical review of current practice, as compared to external practice benchmarks, has helped physicians determine what can safely be handled as a day surgery case. Extensive education has prepared patients for their hospital experience and has provided guidelines as to what will be required of them to meet their discharge requirements.

Table 4
Non-acute Inpatient Volumes

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Rehab Admissions</td>
<td>488 (ALOS 20 days)</td>
<td>412 (ALOS 29 days)</td>
<td>332 (ALOS 36 days)</td>
</tr>
<tr>
<td>Total Chronic/Respite Admissions</td>
<td>17</td>
<td>32</td>
<td>46</td>
</tr>
<tr>
<td>Patients waiting in acute care for transfer to:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rehab beds</td>
<td>8.6</td>
<td>13</td>
<td>9.3</td>
</tr>
<tr>
<td>Chronic or Nursing Home beds</td>
<td>19.5</td>
<td>17.6</td>
<td>18.2</td>
</tr>
<tr>
<td>Referrals to Home Care</td>
<td>200</td>
<td>186</td>
<td>160</td>
</tr>
</tbody>
</table>

ALOS refers to average length of stay

As pointed out, Scarborough General Hospital still has significant room for improvement in its ability to shift more cases to day surgery. Comparative data for 1996
indicated that the performance of Scarborough General Hospital, compared to other hospitals in shifting in-patient cases to day surgery, was lower than the provincial average. This may be due in part to Scarborough General Hospital’s weighted case index that was 1.145 with the provincial average being 1.000. This signifies SGH's patients are more resource intensive (higher RIW) within their case mix group with a higher acuity or sicker than the average patient. This may partially account for some of the physician reluctance to shift these patients to a day surgery setting. One process change that had a positive impact on the hospital's ability to increase the number of day surgery patients was the hospital’s decision to extend the hours of its day surgery recovery program from a closure time of 1800 hours to 2230 hours. This allowed over 100 more patients per month to be managed as day surgery patients.

**Effects of Change on Financial Viability**

One of the components of the first research question was the hospital’s financial and operational viability as it related to the organizational and process redesign initiatives. Financial and operational viability are part of the Health Services Restructuring Commission’s definition of affordability, which also included clinical efficiencies, financial and operational efficiencies, and consolidation of support services. Scarborough General Hospital has demonstrated a long history of affordability or efficient service provision, as reflected in the Ministry of Health’s acute care cost per case information. As shown in
Table 5, the hospital has maintained a balanced budget (SGH has over 40 years of balanced budgets) and has maintained the lowest cost per case in its peer group for the past six years (1990-1996). In 1997, SGH was rated the second most efficient in its peer group. It is worth noting that the hospital’s rating as the second lowest, was based on a minimal difference of $6 per case. This efficiency has been recognized and reflected in the hospital’s Ministry of Health funding reductions since SGH received budget reductions at the lower end of the range in all rounds of the budget cuts.

Paid hours to worked hours is an indicator that differentiates the hours being paid for direct patient care services versus hours paid for associated ancillary or support costs which include administration costs, sick time, education hours etc. Since one of the objectives of the change strategies is to improve efficiencies, decrease layers of

<table>
<thead>
<tr>
<th>Table 5</th>
<th>Funding Reductions and Cost per Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per Case</td>
<td>Unavailable</td>
</tr>
<tr>
<td>Salaries: Paid hours to Worked hours</td>
<td>1.13:1</td>
</tr>
<tr>
<td>Salaries/Benefits: as % of operating expenses</td>
<td>71.5%</td>
</tr>
<tr>
<td>Supplies: Dollars per patient day</td>
<td>$191.98</td>
</tr>
<tr>
<td>Funding Reduction</td>
<td>$5,681,261 (6.2%)</td>
</tr>
<tr>
<td>Budget</td>
<td>$85,877,639</td>
</tr>
</tbody>
</table>

Source: SGH Financial Reports and Ministry of Health Financial Reports
management and achieve process simplification, a tracking of worked hours as compared to overall paid hours is advisable. This tracking is to ensure any changes or shifts in the ratio are appropriate and are consistent with the overall strategies of the organization. In SGH's case, a shift in the ratio to fewer paid hours and more worked hours would be reflective of the new organizational structure with fewer management positions and a targeted decrease in the use of sick time. Other financial data elements included cost per case and salary/benefits as a percentage of operating expenses. Salary/benefits as a percentage of operating expenses is similar to paid hours to worked hours. One of the objectives of the change strategies is to maintain an appropriate work force with appropriate benefit coverage. However, there is also an objective to gain efficiencies through the new organizational structure and through competitive human resource plans. The cost of salaries and benefits as a percentage of the overall operating expenses is a key component of the financial viability plan for SGH. The goal is to have the salaries and benefits percentage as low as possible so that more resources can be directed at providing patient care.

As indicated in Table 5, the hospital has decreased its ratio of paid hours to worked hours signifying that there are fewer hours being paid for non-direct service activities (administration, sick time, etc) and more hours being paid to provide direct care and services to the patient. This reflects the focus of the many change initiatives and confirms that resources are being targeted to patients care. It helps validate the effectiveness of the redesign focus: decreasing sick time; maximizing the efficiency of the
administrative functions; and increasing process efficiency to eliminate unnecessary steps and personnel. The percentage of operating expenses being allocated to salaries and benefits has decreased leaving more resources to be allocated to patient care as reflected in the increase of supply dollars per patient day. This is a positive indication that the hospital has placed a priority on allocation of scarce resources to meet direct patient care requirements. The hospital has maintained financial viability throughout the change initiatives by streamlining management functions, work processes and human resource utilization to achieve efficiencies that allow service volumes to be maintained with fewer dollars and fewer beds.

The question becomes - how long SGH will be able to maintain this cost effective position in the face of ongoing budget reductions, increasing costs of restructuring, and an increased percentage of hospital funds required to support capital expansion projects? Even though the Ministry of Health decided to forego the 1998/99 reduction, the 0% increase does in fact equate to almost a 4.5 % reduction for the hospital once salary increases and supply /maintenance contract increases are factored in. On February 17, 1998 Mckinnon, from the Ontario Hospital Association made a speech to the Standing Committee on Financial and Economic Affairs in Toronto in which he stated that the financial and operating conditions in hospitals are not nearly as stable as we would want them. He pointed out that the 4.5% cut across the hospital sector equate to approximately $250 million. He went on to state that the analysis of 1996/97 year end hospital audited financial statements found a consolidated deficit of $112.8 million which was a rise of over
60% from the $70.3 million identified in 1995/96. This is consistent with the CIBC study (commissioned by the Ontario Hospital Association, 1997), "the overall financial state of hospitals is in serious decline with increasing debt which has been accentuated by the additional costs of restructuring" (p.6). They caution that the financial stability of hospitals is at risk and that efforts must be made to secure adequate funding to support the changes mandated by the Health Services Restructuring Committee, the Ministry of Health, and other external review bodies.

**Effects of Change Strategies on Quality**

As discussed earlier, continuous quality improvement (CQI) was an ongoing theme and was recognized by SGH as a key to the achievement of many of its change initiatives. It was well supported within the organization, and at the time of this writing, 1600 out of approximately 2100 staff had received training in CQI principles. Through the use of CQI principles as identified earlier (Dubnicki & Williams, 1992), the hospital focused on cross-functional teams, decentralized decision making, empowered staff, and quality services to the patient/customer. This resulted in achievement of significant change improvements and continued demonstration of quality patient care and increased efficiencies. Quality was assessed against dimensions such as safety, competence, accessibility, effectiveness, appropriateness, efficiency, acceptability and continuity.
New service delivery methods were updated regularly to enhance the care process and incorporate new best practices. Care pathways provided the optimal sequencing and timing for interventions by physicians, nurses, and other professionals. They were designed to minimize delays, improve resource utilization, maximize the quality of care and improve outcomes. The care pathway implemented for total hip replacements and total knee replacements resulted in patients going home, or into rehab beds, two to five days earlier. Audits and the Functional Improvement Measurement tool (FIM), which is a national comparative data base, indicated achievement of earlier mobilization and improved levels of patient satisfaction. In addition, the patient aggregation of orthopaedics and rehab patient beds resulted in more efficient use of resources, cross-functioning staff and improved continuity of care. The use of improved patient teaching aids also resulted in higher levels of functioning independence for these patients as measured by the FIM.

As Flower (1995) points out, there was a need to involve staff, gain their commitment, and energize them to participate in the change process. The leaders of the change teams had to facilitate the discovery of new options and approaches to solving the challenges facing the organization and encourage initiatives that would optimize new opportunities for growth. They identified key change priorities through: focus groups conducted with employees; issues raised by staff through their managers; priorities identified through the divisional planning process; and the board’s objective setting process. Consistency of plans, strategies and objectives helped keep the organization
focused and also ensured that staff were empowered to be active participants throughout the change process.

One improvement project that was identified as a priority for the hospital involved achieving more appropriate utilization of the emergency department by the public. This project focused on several strategies aimed at educating the public as to when they should use emergency services and when it was more appropriate to use alternatives such as the after-hours clinic. The educational component was undertaken as a partnership or joint venture between emergency department staff of Scarborough General Hospital and North York General Hospital. It involved the development of a multilingual educational program aimed at reducing inappropriate utilization of emergency services. The intent was to educate the public on when, and how, to use emergency services, as well as when and to seek alternative treatment options. As shown in Table 6, this resulted in a reduction of Scarborough General Hospital’s emergency visits and an increase in visits to the hospital’s clinical day unit. It was expected that as the number of SGH’s emergency visits decreased, the number of visits to the after-hours clinic (which is located adjacent to the hospital) would have increased. The statistics however, indicate that there was a slow decline in the number of visits to the after-hours clinic from 1995/96 to 1996/97. The physician job action (partial to full withdrawal of non-essential medical services) impacted the number of visits in the 1997 period since it resulted in reduced hours for the after-hours clinic during this time.
### Table 6
**Outpatient Volumes (Average Monthly Volumes or Rates)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Visits</td>
<td>4,777</td>
<td>4,991</td>
<td>5,277</td>
</tr>
<tr>
<td>After-hours Clinic Visits</td>
<td>20,349</td>
<td>21,101</td>
<td>21,530</td>
</tr>
<tr>
<td>Clinical Day Unit Visits</td>
<td>820</td>
<td>780</td>
<td>742</td>
</tr>
</tbody>
</table>

Source: Scarborough General Hospital Financial and Utilization Monthly Reports

Note: The After-Hours Clinic was impacted in 1997 by the physician job action. The decrease in number of visits reflects the decreased hours of operation for the clinic.

The pattern that has now emerged is that patients who use emergency services are sicker, take longer to treat, and are far more difficult to place due to the lack of inpatient beds. Since almost 50% of Scarborough General Hospital’s admitted patients originate from the emergency department, it becomes clear that reduced inpatient bed numbers will seriously impact the functioning of the emergency department. The original objective of decreasing inappropriate utilization of emergency services was achieved but a different issue has now arisen: how to maintain patient flow through the emergency department with fewer inpatient beds.

In keeping with CQI principles, Scarborough General Hospital’s CQI process was based on a problem-solving methodology and the use of process-improvement algorithms. Problems were analyzed, solution options identified and process changes implemented. An example of how this process was used to change a care delivery process and improve
outcomes was a project that examined patients who arrived in the emergency department with a heart attack. The focus of the process improvement was to review how long it took from the time the patient presented in the emergency department to the time they actually received a thrombolytic agent (a medication that breaks up the blood clots). This medication helps minimize the damage done by the heart attack and survival rates improve the sooner it is given, so it became extremely important to ensure appropriate time frames were achieved consistently. Using a problem solving process, the steps for patients presenting with a heart attack were examined using flowcharts and process maps, unnecessary or duplicate steps were eliminated and problematic steps were redesigned on the basis of the information which was gathered. The process was redesigned to eliminate hold-ups, achieve the targeted time frames, and improve the patient outcomes. The result was achievement of a best-in-class administration time of just under 30 minutes as compared to the pre-project high of close to 120 minutes.

**Effects of Change Strategies on Satisfaction:**

*Employee satisfaction* was identified within the research questions for this study as being an area of interest in terms of how it was potentially impacted by SGH’s change initiatives. An Employee Survey in 1996 in which just over 400 employees participated examined issues such as abilities to work with diverse groups, levels of job satisfaction, and areas of concern in the organization. Employee focus groups were conducted with
120 employees regarding topics such as job satisfaction, management support and opportunities for advancement. A benefit survey was also conducted and led to the introduction of ten new voluntary benefit programs being made available to staff. When compared to peer hospitals, the hospital’s staff turnover rate of 5.3% was 2.7% below the annual benchmarking survey for the hospital industry, a figure that has remained stable for a number of years. As well, the hospital has maintained an excellent final-step grievance resolution rate of 93%. This was a reflection of the good union-management relationships that were maintained throughout the change process.

Use of sick time was selected as an indicator of employee satisfaction and ability to manage the stressful environment of change. As indicated in Table 7, there was a decrease in the 1997 average number of incidents per employee and the average number of days taken per employee as compared to the 1996 figures. The union groups of the Ontario Nurses Association (ONA), Canadian Union of Public Employees (CUPE) and the Ontario Public Service Employee Union (OPSEU) all showed a decrease in the use of sick time. This was seen as a positive indicator since these were the groups most impacted by the bed closures, role changes, patient aggregations, and computer training.

These figures also indicate the effectiveness of the employee attendance awareness program that was implemented in 1996/97. The reduction of 0.4 days in the average number of days per employee equates to savings of 729.2 days for the hospital based on the 1997 figure of 1823 employees. Using an average hourly rate of $18.00, this means cost savings of $98,442.00 for the hospital.
Table 7
Sick Time Statistics by Union Group

<table>
<thead>
<tr>
<th>Union Group</th>
<th>1997 Average Incidents</th>
<th>1997 Average Days</th>
<th>1996 Average Incidents</th>
<th>1996 Average Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONA</td>
<td>3.9</td>
<td>14.5</td>
<td>4.7</td>
<td>13.4</td>
</tr>
<tr>
<td>CUPE Service</td>
<td>3.1</td>
<td>14.3</td>
<td>4.3</td>
<td>19.3</td>
</tr>
<tr>
<td>CUPE Engineers</td>
<td>5.4</td>
<td>31.7</td>
<td>5.0</td>
<td>24.8</td>
</tr>
<tr>
<td>OPSEU Technical</td>
<td>2.8</td>
<td>6.9</td>
<td>4.5</td>
<td>11.1</td>
</tr>
<tr>
<td>OPSEU Clerical</td>
<td>2.8</td>
<td>11.2</td>
<td>4.3</td>
<td>12.6</td>
</tr>
<tr>
<td>Non Union</td>
<td>1.2</td>
<td>3.9</td>
<td>1.4</td>
<td>3.9</td>
</tr>
<tr>
<td>Overall Average</td>
<td>3.2</td>
<td>13.7</td>
<td>4.0</td>
<td>14.1</td>
</tr>
</tbody>
</table>

Source: Scarborough General Hospital Monthly Financial and Utilization Reports

Other indicators of employees' ability to cope with SGH's changing and stressful environment were identified as the average number of lost time incidents (accidents), number of days lost, modified work program statistics, use of the employee rehab unit and use of the occupational health department consulting services (see Table 8). The lost time accidents declined from a 1994 high of 47 to an average of 36 for the years 1995 through 1997. This occurred mainly as a result of the aggressive employee attendance awareness program which monitored more closely employee absences and stressed the use of modified work to return employees as quickly as possible to the work environment. The number of days lost decreased from a 1994 high of 614 to an average of 330 for 1995 and 1996 and rose in 1997 to a level of 408. This 14.7 % rise in 1997 was identified as being
the result of several employees having prolonged periods of recovery due to serious illnesses and was therefore considered to be biased by these outlier cases.

Workers Compensation Board (now named the Workplace Safety and Insurance Board) statistics for modified work programs indicated that the longer an employee was off work, the more difficult it was to get them successfully back into the workforce. Based on this, SGH used its organizational-wide employee attendance program to achieve and maintain an aggressive modified work program. The modified work statistics increased significantly from 124 in 1995 to 320 in 1996 which reflected how effective this program had become in getting employees back to work (in a suitably modified environment) as quickly as possible. Other employee support programs aimed at helping employees cope with an increasingly stressful environment were the employee rehab unit (ERU) and the occupational health department. Both of these services maintained steady caseloads. The creation of the employee rehabilitation unit, the effective modified work program, comprehensive employee accident investigation process, and improved claims management processes resulted in Scarborough General Hospital being named the recipient of the 1995 National Professional Achievement Award (Occupational Health and Safety) sponsored by Southam’s Publications. It also resulted in a refund from the Worker Compensation Board’s NEER assessment (New Experimental Experience Rating) for the years 1994 through 1997. This indicates that SGH’s performance was better than the performance predicted by the Worker Compensation Board’s payment schedule for a hospital of its size, complexity, and activity. The NEER formula determines how an
employer will be charged by using the formula - expected cost minus actual costs times the rating factor that is currently $1.21 per $100 of payroll. Total costs for WCB in 1991 were $1.3 million and this was progressively reduced to the 1997 figure of $357,000. Total costs are impacted by the amount of rebate since the assessment minus the rebate equals the total cost to the hospital.

In February 1998, the human resources department began implementing competency-based human resources and leadership model grounded in the hospital’s mission, vision, and values. The organization made a formal commitment to diversity management practices. The human resource department conducted an employee system review, an employee survey, and created equity and diversity policies to support this undertaking.

Table 8
Employee Statistics

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lost time incidents</td>
<td>37</td>
<td>35</td>
<td>36</td>
<td>47</td>
</tr>
<tr>
<td>(accident related)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days lost (accident</td>
<td>408</td>
<td>334</td>
<td>325</td>
<td>614</td>
</tr>
<tr>
<td>related)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modified work</td>
<td>320</td>
<td>124</td>
<td>159</td>
<td></td>
</tr>
<tr>
<td>Employee Rehab Unit (ERU)</td>
<td>3,214</td>
<td>3,259</td>
<td>3,077</td>
<td>2,074</td>
</tr>
<tr>
<td>- number of therapy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational Health</td>
<td>9,144</td>
<td>10,746</td>
<td>12,348</td>
<td>10,354</td>
</tr>
<tr>
<td>Dept. Consults number</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEER Assessment</td>
<td>436,221</td>
<td>429,557</td>
<td>370,416</td>
<td>634,835</td>
</tr>
<tr>
<td>Refund</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Scarborough General Hospital Monthly Financial and Utilization Reports.
It is not surprising that the changes arising from the redesign of care and service delivery required a substantial amount of human resources planning. With the introduction of new skills, new job requirements and new ways of looking at work, a skills assessment of staff impacted by the changes formed the basis of human resources planning. It was clearly recognized that ongoing, formal, continuing education was crucial to staff's ability to accept new and expanded roles, meet the demands of best practices and function as independent decision makers within a restructured work environment. Improved interpersonal and communication skills were mandatory within this flattened structure with its emphasis on involvement of all team members in the planning and delivery of quality health care. No longer could individuals wait to be directed for every move or deflect the responsibility for their actions and outcomes to multiple layers of supervisors, managers, and directors. The new structures and care delivery models made increasing demands for personal responsibility and accountability and this required new leadership qualities and core skills within the front lines (Kapel, 1992).

Management staff received leadership training and guidance through the use of numerous leadership skill assessments such as the Kouzes and Posner Leadership Practices Inventory, the Emotion Quotient tool, and the Myers-Briggs personality type tool. A leadership-training program was implemented to assist leaders to effectively apply key leadership actions and behaviours, generate and inspire commitment and trust from their staff, and formulate action plans for personal and organizational growth in order to achieve desired objectives. A commitment to life-long-learning was encouraged through
financial support for continuing education and an annual recognition event for staff pursuing continuing education.

For staff faced with new or expanded roles, training programs (using Knowles (1994) and Brookfield’s (1987) adult learning theories) were continually being developed to ensure they were competent and adequately prepared for their new roles. One key example was the patient service associate role (PSA) where staff received two weeks of intensive training to prepare them for their expanded responsibilities. Another example was the registered nurse (RN) expanded scope of practice education and training programs which included improved assessment skills, intravenous-phlebotomy, electrocardiograms, and administering complex medications. The registered practical nurse (RPN) program included training for medication administration, simple dressings and caring for lines and catheters. All clinical skills training had a critical element checklist that was completed to ascertain skill transfer. A test was designed to evaluate the specific training and was used along with a monitoring process to identify deficiencies and provide additional training where required.

It was felt that the hospital’s restructuring and process redesign had created opportunities to realign staff and create new jobs. Numerous opportunities were given to employees to apply for secondments and lateral transfers, and all jobs were posted internally before recruiting externally. Interview panels used behavioural interviewing techniques to reduce the potential for bias. As an additional support, staff were
encouraged to use the newly created career resource centre to assist them in writing their resumes and preparing for their interviews.

The work of redeployment of unionized staff was completed in conjunction with the unions, resulting in successful internal transfers of 167 staff in the fiscal year 1996/97. The unions most heavily impacted were CUPE accounting for 77 of these transfers and ONA accounting for 59 of the transfers. External hires totaled 82 in the fiscal year 1996/97, of which 7 came from the Health Sector Training and Adjustment Program (HSTAP), 45 were walkins, 18 were referred, and 12 resulted from advertising. The new hires were mainly in OPSEU clerical positions that accounted for 19 of the hires and non-union positions accounted for 33. The rate of internal hire to total hire ratio was 60% in 1995/96 and rose to 64% in 1996/97.

There has been external recognition of the hospital’s processes and its efforts to work collaboratively with its unions. Through the use of labour/management committees and the effective use of labour adjustment strategies, the hospital was able to minimize the number of employees who would ultimately be laid off. The proposed full-time equivalent (FTE) reduction for 1997/98 was 79 but with early retirements (8), voluntary exits/retirements (2), and reduction in work hours (21), the final lay-off number was less than 48 staff. Maternity and personal leave vacancies were used as temporary placements in order to keep employees working at the hospital and buy some time for other placement opportunities to arise.
Scarborough General Hospital participated in the annual Benchmarking Survey of the Human Resources Benchmarking Network which covered the period from April 1, 1995 to March 31, 1996. The survey measured twenty-six indicators incorporating numerous facets of the organization’s human resources functions. Overall, twenty-eight institutions representing twenty-four network organizations participated. Participation provided the hospital with an opportunity to examine current practices and develop an awareness of best practices effectively utilized by other organizations. Results were reported and reviewed in comparison with the weighted average or “best indicator”.

In evaluating the hospital’s ability to support employee benefit programs with limited resources the indicators meriting attention were:

- **Dental Benefit Claims Expense Indicator** - Currently, Scarborough General Hospital has the highest dental claim expenses of all participating organizations. From a cost control perspective this may be an area that needs to be addressed.

- **Extended Health Benefit Claims Expense Indicator** - Scarborough General was $261 above the weighted average. This was the second highest indicator of all participating hospitals and once again merits investigation. There may be opportunities to achieve appropriate coverage for staff but at a cost which is more in line with peer hospitals.

- **Sick Pay Expense Indicator** - Scarborough General Hospital currently has a unionized rate of 82% as compared to the weighted average of 71% and a sick pay expense rate of 4.22% which was close to the weighted average of 4.16%. This
indicator was flagged due to its relationship with paid sick hours per eligible employee in each union group and the rate of absenteeism within the hospital as revealed in the Ontario Hospital Sick Survey. SGH's high use of sick time per employee became a major focus for the organization and resulted in the introduction of a full-scale attendance awareness program aimed at improving employee attendance. This was successful in reducing sick time as indicated in Table 7.

- **Paid Sick Hours Per Eligible Employee** SGH's rate was 85 hours of paid sick time per eligible employee which is 8 hours above the weighted average of 77 hours over the survey time period. This is consistent with the organization's high rate of absenteeism as revealed in the Ontario Hospital's survey and is being addressed.

- **Final Step Grievance** - The weighted average for this indicator was 2.99% and the Hospital's rate was 5.47%. There appears to be a relationship between grievance rate and province, which is probably due to the differences in provincial legislation. Although the hospital's rate appears to be high, it is important to note that the high rate may be due to the level of disciplinary activity at the Hospital itself. Strong disciplinary processes and diligent managers resulted in a larger number of grievances. The final step grievance resolution was 93% in 1995/96 and fell to 86% in 1996/97, which is still very good, but reflects some tensions between union and management (quite often centrally initiated) over the multiple changes occurring in the organization that significantly impact job functions.
The results of this Employee Survey identified Scarborough General Hospital as a “normative organization” with the results tending to fall almost exactly on the norms with two exceptions. There was what was termed a “pull up” on management consistency (they do as they say they will) with most scores above the norm. There was a consistently strong “pull down” on accommodation of needs and reduction of stress. There was a consistent fear of job loss and concern over workload, both of which were identified as major stressors. Through the written comments (17 pages), four main themes were identified:

- a strong call for individual recognition and rewards; the latter not necessarily restricted only to monetary - a simple “thank you” was often seen as being enough;
- many comments about performance management, a need for regular feedback, and a requirement to deal with poor performance;
- a significant number of requests to reward good attendance and punish poor attendance;
- a belief that fairness and respect for the individual means treating everybody the same. (Note: this is an educational issue to help people understand that in a diverse workplace treating everyone the same is not necessarily treating everyone fairly - needs differ and accommodation strategies require flexibility and trust).

*Patient satisfaction* was identified in the research questions for this review, as another key determinant of how well the hospital has performed in achieving its change. Inventories of patient/customer satisfaction measures were created and a new internal
customer survey tool was established and implemented with the new divisions in May 1997. External customer surveying occurred through the use of specific divisional surveys, the Scarborough General Hospital-wide comment card survey, and a once yearly (mailed) patient survey as well as the Conference Board of Canada survey. Table 8 outlines some of the patient satisfaction results from the hospital's internal survey tool (a patient comment card) and Table 9 outlines some of SGH's results from the Conference Board of Canada's patient satisfaction survey. The Conference Board of Canada is a private not-for-profit research institute with 41 years of experience. Their survey questionnaire *Measuring Up! Your Opinions on Your Recent Stay in Hospital* is a modified version of the Patient Judgements of Hospital Quality questionnaire, a well tested, valid and reliable instrument developed in the United States in the late 1980's. This tool provides a national comparative survey process which, administered over time, would result in the development of a comprehensive, longitudinal Canadian database. For the purposes of this study, the sections chosen for comparison from the internal and external survey tools were levels of patient satisfaction with the admission process, nurses, doctors, information, discharge and overall. These specific areas were chosen because they used the same questions in both surveys and therefore allowed a comparison over time to be made.

As shown in Table 9, while the overall percentage of patients that rated the hospital as excellent or very good declined from 1994 there was an improvement trend in all categories in 1997. This is encouraging, since this time reflects the outcome of many the organizational changes. The nursing issues identified on the basis of written comments
centered on the perception that nurses appeared to be less caring, had less time to spend with patients, and were slower to respond to calls. When reviewing patient satisfaction survey results it is important to recognize the impact the hospital’s organizational restructuring, process redesign and bed closure strategies had on the various union groups. Some unions experienced a more negative impact to their numbers than others did, as shown in Table 11. Registered nurses (ONA) experienced a 13% decrease between 1995 and 1997, while CUPE (which includes registered practical nurses, housekeeping, patient service associates (PSA’s), food services and central supply/services) experienced an 11% decline during this period. These two union groups contain the majority of the

<table>
<thead>
<tr>
<th>Table 9</th>
<th>Scarborough General Hospital Patient Satisfaction Survey Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>How do patients feel about the quality of SGH’s Services</td>
</tr>
<tr>
<td></td>
<td>Percent Who Rated Excellent or Very Good</td>
</tr>
<tr>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td># respondents</td>
</tr>
<tr>
<td>Admissions</td>
<td>66.8%</td>
</tr>
<tr>
<td></td>
<td>832</td>
</tr>
<tr>
<td>Nurses</td>
<td>77.1%</td>
</tr>
<tr>
<td></td>
<td>807</td>
</tr>
<tr>
<td>Doctors</td>
<td>76.0%</td>
</tr>
<tr>
<td></td>
<td>804</td>
</tr>
<tr>
<td>Information</td>
<td>71.3%</td>
</tr>
<tr>
<td></td>
<td>789</td>
</tr>
<tr>
<td>Discharge</td>
<td>67.0%</td>
</tr>
<tr>
<td></td>
<td>352</td>
</tr>
<tr>
<td>Overall</td>
<td>72.0%</td>
</tr>
<tr>
<td></td>
<td>832</td>
</tr>
</tbody>
</table>

Source: Scarborough General Hospital Comment Care Report

Note: The increase number of respondents in 1997 was due to a revised distribution system and a concentrated effort to elicit more feedback from patients and families.
staff directly responsible for patient care and services and yet they were the groups to experience the largest decrease in numbers. In follow-up discussions, this dissatisfaction with the time to provide patient care was echoed by the physicians in medical staff meetings and by the nurses themselves. They stated that they were increasingly unable to spend the amount of time with patients that they would like, were always rushed, and were unable to provide many of the extras that patients would like and expect.

The workload experienced by nursing (increased patient acuity and decreased length of stays) was felt to contribute to lower levels of job satisfaction and a feeling of disempowerment. Many stated there was just not enough time to successfully meet all expectations: participate actively on change teams, learn the new skills required to meet the demands of changing technology and process redesign and continue to meet patient expectations for individualized care. As stated earlier, areas targeted by the hospital as needing improvement were the efficiency of the admission and discharge process (including the quality of patient information and teaching), co-ordination of care delivery, and the degree to which staff reflected a patient or customer focus.

The hospital’s response to this problem of not enough time to meet all of the demands and expectations has been a reconsideration of the time frames for several of the change initiatives, especially around the computerization implementation schedules. There has been a consensus of opinion from the nursing staff and physicians that too many projects have been implemented simultaneously and there has not been sufficient staff supports provided to allow successful achievement of the desired changes without
jeopardizing the quality of patient care. These concerns were so strongly stated by both
the nursing staff and physicians they resulted in a temporary halt to the Meditech patient
care module implementation schedule, and a rethinking of change strategies to achieve a
computerized patient care information system. In addition, the role out of the patient care
redesign (expanded roles for RN’s, RPN’s and PSA’s) to the remaining units of the
hospital was also delayed. Staff readiness was a critical element for the success of these
projects. Staff at this point did not have either the ability or the willingness to accept these
new changes. To make these initiatives work at this low level of readiness would have
required the use of coercive power. Since the goal was to have empowered staff with the
ability to function as part of a team, the decision was made to readjust the timelines and
implementation strategies according to the expressed needs of the staff involved.

Investment in technology was still viewed as the best way to enable caregivers to
spend more time at the bedside and less time doing paperwork and other menial time-
consuming tasks; but it was recognized that less aggressive implementation schedules
were required. Apart from the Meditech system, other examples of successful
implementation of technology were the introduction of new vital signs monitors that
provide temperature, pulse, blood pressure, and ECG at a glance or the touch of a button.
Patient controlled analgesia was another example; giving the patient control over their
pain medication resulted in decreased utilization of medication, earlier ambulation and
increased satisfaction with the post-operative care as well as decreased nursing time to
administer these drugs. As mentioned earlier, SGH conducted its change initiatives with
Table 10
Conference Board of Canada Patient Satisfaction Survey Results

<table>
<thead>
<tr>
<th>Conference Board Questions</th>
<th>Percent Who Rated Excellent or Very Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=350</td>
<td>Response Rate 51%</td>
</tr>
<tr>
<td><strong>Admissions:</strong></td>
<td></td>
</tr>
<tr>
<td>Efficiency of the admitting procedure</td>
<td>Average 66</td>
</tr>
<tr>
<td>Attention of admitting staff to your individual needs</td>
<td>64.2%</td>
</tr>
<tr>
<td></td>
<td>69.9%</td>
</tr>
<tr>
<td><strong>Nurses:</strong></td>
<td></td>
</tr>
<tr>
<td>Skill and competence of Nurses</td>
<td>Average 68</td>
</tr>
<tr>
<td>Attention of Nurses to your condition</td>
<td>73.7%</td>
</tr>
<tr>
<td>Nursing staff response to your calls</td>
<td>68.4%</td>
</tr>
<tr>
<td>Concern and caring by Nurses</td>
<td>60.1%</td>
</tr>
<tr>
<td></td>
<td>69.9%</td>
</tr>
<tr>
<td><strong>Doctors:</strong></td>
<td></td>
</tr>
<tr>
<td>Attention of your Doctor to your condition</td>
<td>Average 70</td>
</tr>
<tr>
<td></td>
<td>63.0%</td>
</tr>
<tr>
<td>Concern and caring of your Doctor</td>
<td>69.1%</td>
</tr>
<tr>
<td>Skill of your Doctor</td>
<td>76.8%</td>
</tr>
<tr>
<td><strong>Care: (Information)</strong></td>
<td></td>
</tr>
<tr>
<td>Co-ordination of care</td>
<td>Average 62</td>
</tr>
<tr>
<td>Ease of getting information</td>
<td>65.7%</td>
</tr>
<tr>
<td>Instructions</td>
<td>58.3%</td>
</tr>
<tr>
<td>Informing family and friends</td>
<td>70.1%</td>
</tr>
<tr>
<td></td>
<td>55.5%</td>
</tr>
<tr>
<td><strong>Discharge:</strong></td>
<td></td>
</tr>
<tr>
<td>Discharge procedures</td>
<td>Average 66</td>
</tr>
<tr>
<td>Discharge instructions</td>
<td>64.5%</td>
</tr>
<tr>
<td></td>
<td>67.5%</td>
</tr>
<tr>
<td><strong>Overall:</strong></td>
<td></td>
</tr>
<tr>
<td>Overall quality of care and services you received</td>
<td>65.1%</td>
</tr>
</tbody>
</table>

Source: Conference Board of Canada - SGH Patient Satisfaction Survey Reports

minimal resources. Until February 1998, only 0.5 FTE of staff time had been designated for project co-ordination and support to the teams. The leadership roles and team work,
activities were accomplished in addition to regular workloads, so it was crucial to utilize technological advancements to their fullest.

Table 10 indicates the results of the Conference Board of Canada survey tended to provide lower ratings than SGH’s internal survey but the trends were similar. The overall rating provided a degree of validity and reliability to SGH’s process.

When assessing the impact of the redesign to levels of satisfaction, it is also important to include the gender ratio and average age of the staff being impacted. Like most hospitals, Scarborough General Hospital has always had a predominantly female workforce. The male to female ratio has remained stable at a 1:6 from 1995-1997.

<table>
<thead>
<tr>
<th>Table 11</th>
<th>Number of Employees by Union Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1997 (as of March 31)</td>
</tr>
<tr>
<td><strong>ONA – Average age 44 years</strong></td>
<td>613</td>
</tr>
<tr>
<td>(Ontario Nurses Association)</td>
<td></td>
</tr>
<tr>
<td><strong>CUPE Service - Average age 42.2 years</strong></td>
<td>535</td>
</tr>
<tr>
<td>(Canadian Union of Public Employees)</td>
<td></td>
</tr>
<tr>
<td><strong>CUPE Engineers - Average age 48.3 years</strong></td>
<td>9</td>
</tr>
<tr>
<td><strong>OPSEU Technical - Average age 38.7 years</strong></td>
<td>114</td>
</tr>
<tr>
<td>(Ontario Public Service Employees Union)</td>
<td></td>
</tr>
<tr>
<td><strong>OPSEU Clerical - Average age 39.7 years</strong></td>
<td>248</td>
</tr>
<tr>
<td><strong>Non Union - Average age 40.3 years</strong></td>
<td>304</td>
</tr>
<tr>
<td><strong>Total Number of Employees</strong></td>
<td>1,823</td>
</tr>
</tbody>
</table>

Source: Scarborough General Hospital’s Human Resource Department Utilization Reports

This raises potential feminist issues since many of the women are middle aged, of visible minorities, have lower levels of education and many are single parents.
A theme coming from staff forums with this group was difficulty maintaining dual roles and meeting the commitments of home, work and in many cases school. There was also a sense of powerlessness when confronted by a system that was perceived to be run by individuals with more authority and power. Many of this group expressed discomfort with taking a more active role in decision making and discomfort with the growing expectations for rapid change.

SGH has a very mature workforce with the average age for all unions ranging from 38.7 years to 48.3 years and an overall employee average age of 42 years (see Table 11). This average age factor becomes very important when considering future staffing requirements since many of the hospitals employees will qualify for early retirement or voluntary exit options within the next few years. At Scarborough General Hospital, the staff who are leaving represent highly trained, long term employees and replacing them with equally qualified staff will be very difficult. Decrease in staffing numbers has to this point been in the areas most responsible for patient care, and occurred at the same time that the redesign initiatives were being undertaken. Even though extensive retraining was carried out to ensure effective implementation of new roles, new technology and new processes, it was not surprising that patients and staff alike felt a degree of dissatisfaction with the quality of care and service being provided. Staff felt they were being bombarded with multiple changes simultaneously (new organizational structure, new roles, new technology), were given very tight time frames within which to accomplish outcomes and minimal supports in terms of replacement hours to support their individual learning curves.
Table 12 displays incidents selected as other indicators of quality. Falls, medication incidents, and treatment incidents have traditionally been used by hospitals as indicators that reflect staff’s ability to perform according to standards and are used to monitor the impact of process changes on staff’s ability to cope with a change in their work environment. Patient falls, while often not preventable, are sometimes due to inadequate care processes: poor assessments; lack of appropriate precautionary measures; and inadequate observation. Trending of medication incidents has shown that they are most often a result of staff being rushed, not following procedures, being unfamiliar with their role or work environment, and being over fatigued. The incident rates indicated a degree of stability with little impact on patient care. This stability was in spite of SGH’s many changes. Changes that involved the relocation of staff to different units due to bed closures and the redesign of job functions so that registered practical nurses (RPN’s) assumed new roles and responsibilities (such as medication administration). Since many of the new roles were in the early stages of implementation at the time of this report, future incident rates should be closely monitored to ensure any adverse results are quickly identified, followed up, and acted upon. Medication incidents decreased by 25% from 1994 to 1997. This decrease in the total number of medication incidents from 220 in 1994 to 165 in 1997 could be viewed as a positive indicator of the effectiveness of the new expanded role of the registered nurse and registered practical nurse. Blood variance incidents remained steady from 1994 to 1996, but in 1997 there was a 36% drop. This
could also be viewed as a positive indicator of the effectiveness of the process improvements and role redesign.

Table 12
Patient Related Incident Statistics

<table>
<thead>
<tr>
<th>Incident Category</th>
<th>1997</th>
<th>%</th>
<th>1996</th>
<th>%</th>
<th>1995</th>
<th>%</th>
<th>1994</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls</td>
<td>526</td>
<td>58%</td>
<td>558</td>
<td>56%</td>
<td>624</td>
<td>55%</td>
<td>559</td>
<td>52%</td>
</tr>
<tr>
<td>Medication errors</td>
<td>165</td>
<td>18%</td>
<td>170</td>
<td>17%</td>
<td>194</td>
<td>17%</td>
<td>220</td>
<td>20%</td>
</tr>
<tr>
<td>Blood variances</td>
<td>18</td>
<td>2%</td>
<td>28</td>
<td>3%</td>
<td>21</td>
<td>2%</td>
<td>28</td>
<td>3%</td>
</tr>
<tr>
<td>Treatment/Procedure</td>
<td>77</td>
<td>8%</td>
<td>70</td>
<td>7%</td>
<td>66</td>
<td>6%</td>
<td>57</td>
<td>5%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>125</td>
<td>14%</td>
<td>175</td>
<td>17%</td>
<td>222</td>
<td>20%</td>
<td>220</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>911</td>
<td>100%</td>
<td>1,001</td>
<td>100%</td>
<td>1,127</td>
<td>100%</td>
<td>1,084</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Scarborough General Hospital Encon Incident Report Summary

The category of treatment or procedure incidents increased by 35% in the number of incidents from 1994 to 1997. This could reflect one aspect of the new work environment, with its new roles and procedures that requires additional education and follow-up. Overall, incidents decreased by 16% from a high of 1084 in 1994, to 911 in 1997. This is considered a very good quality indicator and supports the assumption that the hospital’s change initiatives are having a positive impact on quality of patient care.

Scarborough General Hospital has been insured by the Healthcare Insurance Reciprocal of Canada (HIROC) since 1991 and has received a premium rebate each year in recognition of the hospital’s success in managing its risk and liability. Over the past six years (1991-1997), the hospital’s legal claims have decreased and no cases have gone to trial. There were 39 cases settled over this period and only three of them have involved costs to the
hospital. HIROC confirmed that SGH’s performance is somewhat better than its peer
group in terms of the number of claims.

<table>
<thead>
<tr>
<th>Table 13</th>
<th>Patient Complaint Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total complaints</td>
<td>138</td>
</tr>
<tr>
<td>Average length of time for resolution</td>
<td>5.1 days</td>
</tr>
</tbody>
</table>

Source: Scarborough General Hospital’s Complaints Report

Another measure of satisfaction identified by SGH was patient complaints that are monitored and followed up. The total number of patient complaints received in 1997 decreased by 25% as compared to 1995 and the average length of time (in number of days) for resolution decreased by 15% (see Table 13). Comments are analyzed in order to initiate appropriate follow-up actions and to ensure continuous improvement of care.

**Effectiveness of SGH’s Change as Reflected in External Reviews**

Health care organizations like education and many service organizations must rely on their ability to achieve recognition and maintain a sound reputation in order to be viewed as key players in their respective fields. The ability to maintain funding is contingent upon an organization’s ability to demonstrate ongoing quality outcomes and services that are perceived as being unique and worthy of support. In addition to funding,
the organization’s ability to attract and retain qualified staff is often related to how professionals view the organization and whether they feel it is advantageous to them to be employed there. The organization’s ability to retain highly qualified staff determines the range and quality of services it is able to provide. It is essential in today’s highly competitive environment that indicators reflective of recognition and reputation be included as determinants of the organization’s success in achieving its desired outcomes.

**Canadian Council on Health Services Accreditation**

*(External Report September 1996)*

At Scarborough General Hospital, one method of measuring recognition and reputation was the hospital’s voluntary participation in the Canadian Council On Health Services Accreditation (CCHSA) process. The accreditation process required the organization to complete a self-assessment using predetermined criteria, followed by a site visit from experts in the field of health care. Hospital teams of staff, management, and physicians were formed to participate in the process of self-assessment and take part in the interviews during the site visit. These teams represented patient care areas such as ambulatory care, cancer care, continuing care, emergency services, maternal/child care, medical/surgical care and mental health services, as well as senior management and the board.
The CCHSA award options are designed to recognize the hospital's level of compliance to CCHSA standards. The CCHSA’s main considerations when determining the most appropriate accreditation recognition option for the hospital, include the hospital’s quality improvement initiatives (CQI) as well as the methods used by the hospital to manage or reduce risk. While it is recognized that some element of risk is inherent in all health service organizations, it is the approach to managing and controlling such risk that becomes important to the survey team when deciding on the survey award.

The accreditation survey report focused on areas where opportunities for improvements were identified either in the hospital’s self-assessment or in the survey results. The task of the hospital and the survey team was to assess to what extent the CQI initiatives were supported by the organization, and whether the CQI initiatives were communicated, co-ordinated and focused on patient needs and expectations. CCHSA expectations around quality improvements include establishing a culture based on the mission, vision and values of the organization and the ability to demonstrate a commitment to the provision of quality care and service. Leadership and teamwork were seen as being an integral part of guiding and facilitating organizational processes to achieve intended results while continuing to meet the needs and expectations of the patient. The accreditation expectations align perfectly with the organizational redesign strategies of the hospital discussed earlier.

The accreditation award options include a three-year award, which indicate the hospital has shown evidence of commitment to and application of the principles of CQI
(including the use of indicators to monitor and improve the quality of care and services). It also indicates effective methods are in place to manage risk to patients, staff, and visitors and that overall compliance rating for the majority of the standards was substantial with no rating being non-compliant or minimal. With a three-year award, the recommendations focus mainly on continual improvement to help the organization in furthering its quality initiatives.

The next option is an award of Accreditation with Report that means the CQI principles were not consistently applied across the organization and monitoring indicators were being developed but were not being used to monitor and improve performance. It also indicates that risk management is not effective or consistently applied and the compliance rating with the majority of standards was partial or substantial and no rating is non-compliant or minimal. With this award, the recommendations focus on gaps in process implementation or lack of evidence to support the claimed achievement of results.

Another award option is Accreditation With Review or Revisit which means there was minimal evidence of CQI activities, little development of monitoring indicators and the compliance rating for the majority of standards was partial or minimal. In this award, the recommendations focus on issues requiring immediate attention since they are felt to represent significant risk to patients and staff if not addressed. The final award category is Non-accreditation that indicates there is no evidence of a commitment to CQI, no development of monitoring indicators, and no evidence or a risk management program. It also means the compliance rating for the majority of standards was minimal or non-
compliant and the recommendations focus on the lack of core processes necessary to support organizational commitment to CQI and risk management and achievement of national CCHSA standards.

Scarborough General Hospital, in its most recent Accreditation survey (conducted from October 28 to November 1, 1996) received a three-year accreditation award. As stated, this three-year award indicated the hospital and the survey team had rated the majority of standards as substantial for compliance. It also indicated that the hospital had been able to show evidence to support its commitment and application of CQI and risk management principles and the use of indicators to monitor its many improvement initiatives. The summary/feedback report was focused on assisting the hospital in its efforts to further strengthen its CQI initiatives and contained many review comments and observations. The CCHSA report recognized Scarborough General Hospital for its excellent teamwork and its commitment to CQI. The report provided an external objective assessment of the redesign initiatives the hospital had undertaken and provided concrete evidence of the success of these changes. It also confirmed that the hospital had utilized the principles discussed in the literature review as being an integral part of successful change initiatives, principles of leadership, planning, CQI, teamwork, and patient centered care. The CCHSA survey team commented that, “The board, management and staff at SGH have worked hard to operationalize their mission and the philosophy of quality improvement is being adopted throughout the organization”. They highlighted that “many positive changes have taken place and SGH is commended for their futuristic approach to
clinical pathways, multi-skilling, work redesign, program management and the excellent teamwork that is demonstrated throughout the facility" (CCHSA February, 1997 SGH Accreditation Report).

*The summary report from the CCHSA surveyors to Scarborough General Hospital* contained only seven recommendations that were identified under specific headings. Under Leadership and Partnerships, the hospital’s governance team was described as being “exceptionally well informed and committed, and having an excellent grasp on key external and internal issues and challenges” (CCHSA, 1996 p. 15). The board was felt to be “clearly patient-focused in its approach to governance while providing strong leadership about health reform issues which go beyond the traditional role of organization-focused trusteeship” (CCHSA, 1996 p. 15).

The CCHSA survey team recognized the numerous community initiatives that had been undertaken to ensure the hospital’s services would continue to meet the needs of the community. These included public forums, open board meetings, and an ethno-racial patient relations program. The board’s strong commitment to fiscal accountability was also seen as noteworthy but there was a caution that as resources become scarce, the board would be challenged to justify the appropriateness of all hospital-based services. The team stressed the need to ensure a match between community needs, the hospital’s mandate, and the available resources, both human and physical. The team suggested that the board strive to aggregate quality, productivity/utilization and financial indicators in order to support future decision-making.
CCHSA survey comments related to management indicated that there was “a strong commitment to the quality improvement philosophy. The surveyors indicated that “teamwork is evident throughout the organization” and that “attempts have been made to understand consumer needs within the organization through staff satisfaction surveys, a human resources survey and the use of patient comment cards” (CCHSA, 1996 p. 16). The survey team felt “the hospital has an organization-wide quality improvement approach, and staff have been well trained to support these activities” (CCHSA, 1996 p. 16). The survey team observed that there were many projects underway, and they encouraged management to develop ways of tracking, coordinating and evaluating the various initiatives in order to be able to determine the impact of each.

The CCHSA survey team suggested that future CQI projects included:

- studies about the appropriateness of the many surgical procedures that are available;
- more open, and preferably multi-disciplinary, reviews of morbidity (number of cases of a specific medical condition in a given time period) complications and mortality rates;
- efforts to increase the 3% autopsy rate, particularly when innovative or experimental therapy has been applied;
- development and careful review of indicators used to monitor the effects of the shortened length of stay on the quality of care; and
- interdisciplinary rounds scheduled at times when physicians could participate.
The suggestions regarding assessing the appropriateness of surgical procedures available is particularly relevant since it relates to the access issues but it also relates to the fiscal accountability and the allocation of scarce resources. Hospitals, like educational institutions, may want to continue to offer all things to all people, but the reality is that this is no longer possible. Tough decisions need to be made around the core business of the organization the changing mandate. SGH made an initial attempt to resolve this issue by identifying its key services but was not able to follow through due to intense political pressure from the physicians. No one is willing to agree to not providing a service when that service is the source of his or her livelihood.

Much of the content of the seven formal recommendations made by the CCHSA survey team to SGH was closely related to areas previously identified by SGH as being integral to its organizational and process redesign initiatives. This congruence provided an external objective validation that the hospital was heading in the right direction and was realistic in its assessment and direction for change.

The first CCHSA recommendation to SGH related to the need to develop monitoring indicators for all areas of the hospital to ensure that standards of performance are being met on a consistent basis. Scarborough General Hospital’s development of indicators is more advanced in some departments than it is in others; this is reflected in the CCHSA statement that currently there are some indicators of performance for ambulatory care but the development of additional indicators is required. The survey team acknowledged that weak areas seem to already have been identified by the staff in the self-
assessment and recommended that additional performance indicators be developed which include indicators to monitor the cost and quality of service delivery. To comply with this directive the hospital conducted workshops on the development of indicators, identified corporate indicators with the board and senior team, and implemented a software program called MedQM in the fall of 1997. This software is fully integrated with the hospital’s Meditech computerized data base and allows tracking of data elements/indicators which can be grouped into specific report formats for follow-up on a regular basis. This will greatly improve the timely availability of information and the ability to determine cause and effect relationships between specific actions and outcomes.

The second CCHSA recommendation to SGH focused on quality of care issues identified in the emergency department. As stated earlier, Scarborough General Hospital is often limited in its ability to redesign care delivery processes and address some quality issues due to its structural limitations. One of the areas where this is particularly relevant is the emergency department, which has been repeatedly targeted for renovations to support changes in care delivery processes but, due to lack of funding, has been unsuccessful in achieving this. The department is poorly designed for the large volumes of patients being treated and often during peak periods provides limited opportunities for ensuring privacy. This fact is reflected in the CCHSA’s recommendation that improvements to the emergency department must be made to ensure that patient safety is not compromised, patient privacy and dignity is maintained, and a comfortable environment be provided for
all staff and patients. In response to this recommendation, SGH once again re-submitted its master plan (facility renewal plan) to the Ministry of Health in July 1997.

This plan includes a new emergency department that would support the efficient flow of high patient volumes, provide the sophisticated technological support required to effectively meet complex care requirements, and provide a safe and comfortable environment for patients, staff, and visitors. This type of recommendation is often frustrating for the hospital since it identifies a problem that is already well known but one over whose resolution the hospital has minimal control. Ministry of Health approval is required before any building projects can be undertaken and this approval process is long, complicated and difficult to obtain. Even if the hospital were prepared to spend its own funds, approval is still required before work could proceed.

In SGH’s process redesign, significant attention had been placed on the patient flow from admission to discharge. The emphasis was on achieving streamlined work processes that would ensure accurate and timely information, appropriate planning and delivery of patient care, and achievement of desired outcomes within a targeted length of stay. CCHSA’s third recommendation acknowledged that some admission/discharge planning initiatives had been developed but recommended that the medical care team improve the admission and discharge processes, especially for patients waiting in the emergency department for an in-patient bed. The survey team felt that additional efforts were needed to facilitate the continual flow of in-patients from the emergency department, particularly to intensive care and coronary care units. As indicated, SGH has maintained
its service volumes in spite of significant bed and funding reductions. However, one of the areas where the domino effect is evident is in the emergency department (see Table 6). This represents a significant trend that began to be identified in late 1996/97. This trend has continued to the point where in 1998 there is an average of 15 to 20 patients per day who have been admitted and must wait in the emergency department until an inpatient bed becomes available. If this continues, an average of 15 patients per day extrapolates to 180 for 1997/98 as compared to 120 for 1996/97.

Many feel the solution is simply to add more long term care beds but there is also recognition that the primary care system must also be changed. Many patients with chronic conditions seek care in emergency departments, and require admission, simply because the community and home care support structures are not yet in place.

Even though the volume of emergency patients has decreased, the acuity has increased, meaning patients are sicker, take longer to process, and are more difficult to place. This trend is not restricted to SGH. It is being identified all over the city of Toronto and has been the topic of a great deal of media discussion as evidenced in a January 28, 1998 Toronto Star article and the CBC television news channel coverage for the week of January 26, 1998.

In spite of the backlog of patients in the emergency department, the media coverage remained very positive about the care being provided for SGH patients and noted that while access was being impacted, quality was being maintained. Some of the major contributors to this situation are the lack of long-term care beds that cause a
backlog in acute care beds. Patients in acute beds who no longer require this level of care, increasing need to isolate patients with drug resistant bacterial infections (blocks beds since room cannot be shared and private rooms are limited), and fewer acute beds due to bed closures all contribute to the backlog situation.

**Table 14**

**Access to Care: Quality Indicators**

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<tr>
<td>Number of admits through Emergency</td>
<td>824</td>
<td>892</td>
<td>917</td>
</tr>
<tr>
<td>Admit with no bed available at 001 hours</td>
<td>120</td>
<td>50</td>
<td>43</td>
</tr>
<tr>
<td>% of time ambulances called off</td>
<td>13.4%</td>
<td>5.5%</td>
<td>6.3%</td>
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Source: Scarborough General Hospital Financial and Utilization Monthly Reports

Note: % of time ambulances “called off” indicates a situation where either the emergency department is so full of patients it cannot accept any new ones and must therefore redirect the ambulance to another facility or the number critical/trauma patients is too high to allow the current number of staff to safely accept any additional ambulance patients. Walk-in patients continue to be accepted during times of redirect and additional staff are called in when the situation warrants it but until the situation is resolved ambulances are asked to take patients to other facilities.

CCHSA’s fourth recommendation to SGH identified a gap between the hospital’s commitment to maintaining standards of practice and its level of compliance in one specialty area. The survey team noted that there were no written criteria for determining who could administer chemotherapy in the cancer care unit. They stressed that indicators of competency, which are regularly compared to the qualifications of these individuals, are essential. They recommended that indicators of competency for the professional staff who
administer chemotherapy treatments be developed and that these criteria also be built into the hospital’s credentialing process. They suggested that this be done as part of SGH’s overall process to ensure that physicians and other staff are competent and qualified to perform the task they are assigned. This is one example where an informal process existed but was not reflected in a documented procedure. This had since been addressed by the hospital by ensuring that appropriate documentation is in place. This was an unfortunate situation since most of the oncology nursing staff actually have their national certification through the Canadian Nurses Association (CNA).

The review of the hospital’s risk management programs includes several distinct components: disaster planning and emergency measures; complaint process; and infection control. It is expected that infection control statistics should be monitored on a routine basis and tied into improvement initiatives. At Scarborough General Hospital there have been ongoing deficiencies in the design of this program, mainly due to the very strong physician beliefs as to what requires monitoring and what does not. CCHSA’s recommendation number five to SGH identified this program deficiency with a recommendation that processes for the prevention and the control of infections be improved by adequately monitoring, collecting, tabulating analyzing and reporting nosocomial infections (hospital acquired infections).

The issue of how to get physician agreement that the monitoring component of the infection control program must be expanded continues to be a challenge. It is however a challenge that must be addressed since this position can seriously impact the whole
organization and the patients being served. It is a very good example of how hospitals (like universities or other larger societal systems) are no longer entities unto themselves, able to function independently. Hospitals are part of a large and complex system and are evaluated and held accountable by that system. Literally, it means the hospital must play by the rules and implement an infection control monitoring and tracking system that meets accepted program requirements or be willing to pay the price. The price in this case is an accreditation recommendation and potential for future risk and liability should an adverse situation occur.

The manner in which the hospital has begun to address this concern is to implement improved monitoring techniques through the use of the statistical MedQM software. As mentioned earlier, this software provides real time data and the ability to accurately track relevant information in a manner that allows appropriate action and follow-up. This tracking is done by the hospital’s infection control officer and does not require the involvement of a physician. While it addresses the problem on one level, it does not address the problem of making physicians team players that recognize the needs of the organization as opposed to personal needs and beliefs. In the past, when organizations were less complicated and less accountable to external bodies, a physician could dictate what would be done and how it would be done but now this is mandated by professional standards of practice, program guidelines, and external review requirements such as the CCHSA.
As mentioned, another component of the SGH’s risk management program is the disaster plan. It is the expectation that a comprehensive disaster plan be tested both internally and externally on a regular basis. While the hospital had spent a great deal of time updating this plan and had tested it internally, there had been no external testing of the program in a long time. This was reflected in CCHSA’s recommendation number six that as part of the process related to preparing for internal and external disasters and emergencies, a complete disaster plan be developed that would include a major disaster exercise to take place within one year. The importance of this recommendation to this study is that when organizations are faced with dramatic changes, cutbacks, and streamlining of processes, often the first things to be cut or neglected are safety programs. It takes time, energy, and a commitment of staff resources to maintain these programs and yet these programs ensure a safe environment that supports quality care and services. The hospital responded to this by completing an external mock disaster in October 1997. This exercise included the police, the fire department and students from a near-by high school who were made up to resemble victims of a large train and bus crash.

CCHSA’s seventh recommendation to SGH stressed that the board, as part of the process for establishing the parameters within which operational plans are developed, must ensure that the appropriate resources are available to support current services and programs. It is well recognized that hospitals, unlike other industries, must maintain their day to day business (looking after patients) regardless of what change processes may be occurring. As discussed earlier, there are no options to close down for a few days while
systems are being implemented and staff are being trained: instead, there is a requirement that care must be maintained at the same level of quality and with no additional risk. This adds far more complexity to the change process and requires careful planning and allocation of sufficient resources to support the business-as-usual component, as well as the change component. It also requires recognition of the increased stress for staff since they are required to meet a wide range of expectations with little additional support. This was one area where concerns were starting to mount; as just discussed, staff needed more resources to support the ongoing change initiatives.

As part of recommendation number seven, the survey team then went on to state that redevelopment of the physical plant was required and that it was essential that a plan for the redevelopment be completed and implemented. Once again, the need for redevelopment of SGH’s physical plant has been well recognized and is reflected in the master plan which has been updated and submitted to the Ministry of Health a number of times. There is commitment on the part of the hospital that a suitable care environment is essential to ensuring quality services are provided to the community. The dilemma however, is that Ministry approval is required before any renovation or new construction can occur and according to the new guidelines effective 1998, the hospital must now come up with 50% of the funding to cover the building costs. Given the hospital’s current challenge of maintaining financial viability for the present range of programs and services, this is a very significant recommendation.
This type of recommendation reflects the lack of co-ordination between the different agencies and review bodies since the CCHSA is making recommendations that are in effect beyond the control of the hospital. The hospital has developed a master redevelopment plan and submitted it to the Ministry of Health but it cannot implement it without appropriate approval and then only if it is able to raise the required funds from the community. This raises concern that the community is asked on a regular basis to give donations to support capital equipment purchases for the hospital, development of new programs, and now renovations. There is only so much money that the community is able and willing to give. The ability to raise funds impacts on what the hospital is able to do and when it is able to do it.

Somehow, the responsibility and accountability of review bodies such as the CCHSA must include understanding the system dynamics and processes for the organizations they are surveying, and then making recommendations that are appropriate and within the control of the organization to comply with. To make a recommendation that is beyond the control of the organization (e.g. build a new facility) puts the organization at risk and can seriously impact its reputation through its accreditation award report. These reports are public documents and are referred to by the Ministry of Health and other external review agencies.

Some of the CCHSA comments on SGH’s change initiatives that provided external confirmation that the hospital was responding to the needs of the community,
improving access and quality of services, and living up to its patients-as-partners philosophy, included the following (CCHSA, 1996):

♦ computerized access to the patient’s past history and diagnostic procedures has reduced the number of repeat examinations and has improved the availability of information to other services;

♦ a comprehensive triage system in Emergency (which streamlines the patients timely access to appropriate service) has been well planned and implemented and includes the development of indicators which are monitored;

♦ other progressive initiatives which improve access to support services for needy patients include the mental health crisis intervention team and the social service quick response team for the frail elderly and other socially at risk patients;

♦ a project with the critical care team whereby access to the intensive care unit was improved (the survey team did indicate however that the issue of access to regular hospital beds for patients waiting in emergency was still unresolved);

♦ success in lowering the thrombolysis time for acute myocardial infarction patients (timely administration greatly reduces the amount of myocardium lost and improves the patient’s outcome significantly) which has now surpassed its target of 30 minutes or less (a reduction from a high of almost 90 minutes);

♦ the caesarian rate of 16.7% is high but is a decrease from previous rate of 19% and it is acknowledged that efforts are being made to further reduce this;
the efforts of SGH’s paediatrics department resulted in the creation of an asthma centre (which was a co-ordinated effort between SGH and the Hospital for Sick Children) and expanded paediatric mental health programs;

team development of care pathways was seen as being a more consistent approach to care, improving teaching and communication and better defining the roles of the various team members;

early discharge planning and more efficient use of medical beds was facilitated by the introduction of a medical observation/short stay unit (MOSS) and the addition of a clinical nurse to assist with coordinating and streamlining the care delivery process for these patients;

reduced length of stay in the surgical areas was attributed to same day admission and day surgery which was made possible by accelerating the pre-admission program changes, improving the admission and discharge processes, facilitating laboratory accessibility and extending day surgery hours to 10 PM;

particular note was given to programs and process changes which improved patient care and ensured the focus centered on the needs of the patient. These included the patient self-catheterization program, self-medication program, care pathways, staff multi-skilling, appropriate support services and initiatives such as the autologous blood procurement and blood recuperation programs;
Information management has developed an information teaching plan which is comprehensive and continues to be effectively implemented, staff are well trained and support activities are available; there is evidence of significant volunteer involvement in the hospital (this is a strong message of support from the community to Scarborough General Hospital); other strengths that were commented on included the commitment to a continuous learning environment, the commitment to significant staff involvement in planning and decision-making, the planned shift to a wellness focus in occupational health and safety and the creation of a career resource centre to support staff in this time of change; and the Patient Service Associate (PSA) role is another example of efforts that were recognized as having been made with regard to customer service and quality.

Canada Awards of Excellence (External Report July 1997)

The Canada Awards for Excellence Assessment Examination Feedback Report (July 1997) provided another external report that helped provide an objective assessment of the effectiveness of SGH’s change efforts. This report concluded, “there is considerable energy and enthusiasm evident and many examples of success and significant improvements in specific areas”. It also stated that “with continued perseverance, some refinement of the approach, and broadening of the scope of improvement efforts, the
hospital should in the future be able to improve faster than the norms in this sector, and thus establish a leadership position in overall performance” (CAE p.1). "There has been evolution of the process management methods used within SGH, from a problem-solving focus to the current more pro-active process definition/process control focus” (CAE, p. 22).

Recognition was given to the “significant investment in training and development of staff, including the career resource centre and commendable attention to diversity in the workplace”(CAE, p. 3). There was also recognition of the various methods by SGH to communicate with staff and encourage their involvement. This recognition resulted in the team’s observation that “there is evidently a high level of satisfaction among employees and a high degree of medical and staff participation in improvement projects related to patient care” (CAE, p. 3).

The specific areas of recommendation in this report focused on the need for increased senior management leadership effectiveness by providing a more visible presence in the improvement efforts. It also called for a more structured planning approach with a better focus and alignment on strategic goals. An assurance was needed by external reviewers that hospital planning and resources were sufficient to achieve the desired goals. There was a recommendation to make better use of the extensive data available that would help set the stage for greater process improvement. “There is a need to establish a mindset of ‘closing the loop’ around established processes, routines and methodologies” (CAE, p. 23). Examples included routine debriefing of CQI teams after project completion to
ascertain what methodologies worked well and where there were opportunities to improve, using patient surveys to identify opportunities for improvement in patient care, and using employee surveys to identify improvements required in leadership and human resources processes. These observations are consistent with many of the issues identified by SGH in its project documentation. The reviewers state that “the leadership of Scarborough General Hospital has been highly successful in communicating the direction of the organization to the employees, in securing broad-based participation of staff and other stakeholders, and in creating an atmosphere of teamwork, empowerment and striving for improvement” (CAE, p.1).

The CAE reviewing team identified that Scarborough General Hospital, as an organization, had “articulated ambitious strategic goals and had developed these goals thorough comprehensive plans”. They observed that “considerable effort had been invested in improvement initiatives and creditable successes had been achieved” (CAE, p.1). They recognized that a continuous quality improvement plan was launched in 1993 and implemented over a three-year cycle. They noted that definition of the hospital’s mission, vision and values had been the first step in that plan and the guiding influence for the resulting change initiatives. They also acknowledged that “the structure to support and monitor planning had evolved to include the corporate team, divisional co-directors, the clinical resource management team, the patient care delivery team and the board’s quality review committee”, They identified that “a culture of improvement is palpable” (CAE, p. 11).
The section of the CAE report that identified future opportunities for the hospital noted a communication/co-ordination gap. The survey team pointed out that while “there are a number of support and monitoring teams/committees, there is not a system that ‘pulls-up’ improvement initiatives aligned with the hospital’s goals so that judicious selection and prioritization can be executed” (CAE, p. 11). There was concern that a more systematic way of learning from experience, reviewing the effectiveness of planning approaches, and refining methods to link appropriate plans with the overall organizational strategies was required. Another observation was that “although the transition to the dyad/co-director organizational structure is supported, there is a potential for physicians (in particular, those not directly involved in improvement initiatives) to feel disenfranchised and without a voice” (CAE, p. 17).

In relation to staff, the CAE team felt that “the development of an annual human resources plan, complemented with trend data related to employee satisfaction and other relevant indicators would provide a basis for review and improvement of the management of staff” (CAE, p. 18). As mentioned earlier, this lack of ongoing assessment of staff and physician satisfaction made it very difficult to assess the effectiveness of the redesign from this perspective. The change teams in many instances had either neglected to plan for appropriate before and after evaluation methodologies or had not followed through on the evaluations as planned. As a result, they were unable to identify causation or relationships between many of the change initiatives and the outcomes observed.
The CAE assessment team noted in their report that various methods had been utilized to identify future needs of the patients being served, and that patient satisfaction and feedback was monitored using a combination of internal and external tools. Care pathways were identified as an “excellent start in process definition within patient care delivery using a proven methodology together with appropriate mechanisms for project selection, team initiation, training of participants and facilitator support”. It was pointed out that process control could be improved by “trending available data to predict future results, and by using root cause analysis to identify and eliminate the fundamental causes of common non-conformances” (CAE, p. 3).

The CAE survey team felt that process improvement had not yet been applied to the systematic ongoing refinement of processes that had been stabilized. They felt that “there was an opportunity to achieve ongoing, cumulative improvements and to approach ‘best in class’ performance by mastering and applying this aspect of process optimization” (CAE, p. 3). This comment is particularly true of SGH. Many change initiatives were undertaken at the same time, within very aggressive time frames and with minimal additional project support staff. The focus was always on continually moving forward with little regard to revisiting completed change projects to review, evaluate, and update. Up until late 1997, there was no effort to re-enter the loop and re-assess, re-design and re-implemement in order to achieve improvements or best in class. Around strategic directions, the assessment team identified concerns such as the organization’s strong focus on cost reduction (e.g. reducing length of stay) which they felt might be obscuring opportunities
for process improvements aimed at improving patient care. They felt that the hospital’s change strategies and change plans appeared to be aimed at parity with peers (comparisons tend to be against the average) as opposed to best in class performance.

This was not consistent with the hospital’s initial intentions since stretch goals, out-of-the-box thinking and benchmark performance were identified as being what was desired. The survey team also noted lack of specific target dates in the strategic plan and felt this was a failure to indicate expected future results. This comment was felt to be less valid than many of the other survey team observations since target dates were almost always identified in the project plans and Gantt charts. If any criticism was warranted on this point it was that these target dates were almost without exception, too aggressive. They did not provide adequate allowance for staff learning curves, time to adapt to the change process and time to accomplish quality outcomes with minimal resources.

The CAE team identified other opportunities for improvement. They urged SGH to recognize the need to review all processes (not just the patient care processes), and a gap they identified involved the lack of attention to redesign of the management and administration areas. The review team felt that “there appears to be little or no attempt as yet to define management or administrative processes beyond the creation of traditional policy and procedure documents” (CAE, p. 20) and “there appears to be little process control applied to management or administrative processes” (CAE, p. 21). From the perspective of this study, this was not a particularly valid statement. The 1996-1997 organizational redesign had reduced the number of vice-presidents from 5 to 3, nursing
management positions from 25 to 5, eliminated all 3 director of nursing positions, and implemented an entirely new organizational structure with co-directors (dyads). These new director dyads were now responsible for divisions that were organized around the needs of patient aggregates.

During this period, system improvements included the information management system (IS) that was implemented to provide on-line access to real time financial and utilization data to support evidence-based decision making. Many administrative responsibilities were simplified using the hospital’s Meditech system and decentralized to provide empowerment to the management staff responsible for the area. Payroll functions were converted from a manual to a computerized system, an employee attendance program was implemented to track and manage absenteeism, and the entire committee structure for the organization was reviewed and streamlined to improve efficiency and effectiveness.

The issue was SGH’s apparent inability to clearly identify these changes to the external survey team, in a manner that allowed them to identify and understand the efforts to date in these areas. In some cases, there was a lack of clear documentation that tracked the changes and, in other cases, the individuals being asked questions by the members of the survey team failed to recognize the connections between these changes and the area being assessed. This is often a problem with a change project as large and complex as the one undertaken by SGH. The individuals who are involved in various projects understand their part of the change but they may not be fully aware of the many other change
initiatives going on at the same time. This indicates a lack of systems thinking and of understanding of the changes at the macro level. It is frustrating since it occurred in spite of the regular updates in the Monitor (SGH’s internal publication), the president’s fireside chats which are held about four times a year, and regular information bulletins on the hospital-wide e-mail system.

The survey team credited the comprehensiveness of SGH’s educational training and other programs that had been provided to assist staff cope effectively with the changes. They approved of the resource materials for promoting quality improvement and supporting skill development and noted that “it is the staff’s impression that in-service training provided by the hospital is of high quality and that courses have improved over time” (CAE, P. 16). The hospital’s periodic sampling of employee satisfaction was commended. Although there was recognition of the “very high level of empowerment among employees” and the achievement of “good relationships with the unions”, there were concerns around leadership, specifically the perception by employees that “senior management is not perceived to be very involved in improvement efforts” (CAE, p. 6).

The report elaborated on this point by stating “there is not visible participation of senior management in training and informal coaching to reinforce the importance and management’s commitment to improvement initiatives” (CAE, P. 17). As Nanus (1992) indicates, staff want leaders who are involved and help make things happen. Leadership was identified as being a key ingredient of successful change at SGH, and while there were senior management sponsors for the change teams they did not have a consistent
involvement at the staff level and were not a visible presence in the areas being impacted by the changes. This accounted for the majority of staff having little if any exposure to the senior team and supported the staff's impression that these individuals were not coaches or mentors within the change process. Each change team might have only one representative from each of the departments being affected and depending on how effective that staff representative was at sharing information determined to a great extent the staffs' sense of being involved, informed, and knowledgeable about what was happening.

The CAE report also noted that “there is not a systematic way of obtaining feedback to help determine leadership development needs or to assess the effectiveness of leadership development efforts” (CAE, p. 7). The assessment team observed the hospital’s training and development programs as strengths. They noted the recent establishment of the career resource centre, the strong partnerships between the hospital and local schools and colleges to facilitate the delivery of training programs and the extensive in-house training programs to support staff in acquiring new skills to meet new roles and responsibilities.

The CAE report recognized the hospital’s efforts to focus on customer-driven innovations and achievement of customer satisfaction. They felt that while the hospital’s primary customers had been defined as patients, families, and Scarborough residents, “the process for identifying customer groups was unclear and that important stakeholders may not be considered (e.g. The Ministry of Health, referring physicians, other Scarborough
hospitals). There was a sense that the hospital needed to carefully review the tools used to identify customers and their needs and ensure that the right tools were being used to provide the required information. The survey team stressed that “comment cards and survey instruments are not appropriate to discover customer needs (i.e. they measure satisfaction of known or assumed needs)

The report did however recognize that “systems are in place to monitor conditions in the region and thus recognize the need for new/expanded services”. The hospital’s dialysis program was a prime example of how SGH identified a need and responded by implementing a new program that was later designated as a regional program. The team supported the hospital’s use of research findings to identify needs for new treatments” (e.g. changes to thrombolytic treatment in the emergency department). The report also identified that “better use could be made of demographic projections, population health trends and technological development to determine and plan for future customer needs” (CAE, p. 8).

In addition, they point out that “customer satisfaction data could be used more effectively to identify improvement opportunities and drive improvement initiatives” and that “analysis of results, trends, and communication of the resulting information, would help identify improvement opportunities” (CAE, p. 9). The team concluded that there appeared to be a lack of a systematic, long-term strategy for gathering and using customer satisfaction data. This is a valid assessment since the hospital tends to generate significant
amounts of longitudinal data but has not developed a consistent method of utilizing it to guide decision-making and prioritize issues requiring follow-up.

Institute for Clinical Evaluative Sciences (ICES)

The mandate for Scarborough General Hospital's mental health program was to provide a continuum of services that enables people with severe mental health problems to remain in the community, using hospitalization only when clinically necessary. Consistent with the goals of the Ministry of Health's mental health reform, the hospital has involved consumers/patients in all levels of decision making including program committees and the management committee. Using discharges against medical advice as an indicator of consumer satisfaction with the quality of the services being provided, ICES (1996) shows Scarborough General Hospital's average of 5.1% is better than the provincial average of 10%. This ranks the hospital as the leader in the central east region.

Another goal that the hospital has pursued and achieved is demonstrated improvements in administrative efficiencies and inpatient program outcomes while maintaining current service levels. Over the past three years, mental health services at Scarborough General have reduced their budget by approximately $250,000 without any effect on direct services. This has been accomplished through restructuring of the department into a modified program management model. As well, computerization and physical relocation of services have allowed reduction of non-direct service personnel. The
key mental health service/program restructuring initiatives included implementation of case management, 24-hour crisis intervention, and housing supports that are planned and run by consumers/patients. The hospital is already below the recommended bed ratio of 30 beds per 1,000 population recommended by the Ministry's mental health reform. Through innovative programming that includes an early discharge program, community outreach programs, and use of short-term assessment/stabilization beds, the hospital has demonstrated that the quality of services can be maintained.

SGH's use of its day hospital program, the crisis intervention program, short-term stabilization beds and early discharge program have all resulted in reduced need for admission and shorter length of stays (consistent with the mental health reform's emphasis on keeping people in the community and using hospitalization only when necessary). The Institute for Clinical Evaluative Sciences in Ontario (ICES Practice Atlas, 2nd Edition, 1996) reports on indicators reflecting Scarborough General's success in keeping people in the community as well as the severity of illness of the hospital's patient population.

SGH's average length of stay was 10.1 days as compared to the provincial average of 15 days. This ranks SGH as the second lowest in the central east region which includes twenty-one general hospitals with psychiatric programs, and the lowest in Scarborough.

SGH's May Not Require Hospitalization figure (MNRH, a Canadian Institute for Health Information category which identifies the percentage of admissions that do not appear to meet admission criteria and therefore should have been treated as
outpatients or in the community). SGH's rating of 13.4% was below the provincial average of 23.7%. This ranks the hospital as third best hospital in the central east region and the best in Scarborough.

SGH's average for percentage of involuntary admissions was 33.9% as compared to the provincial average of 30% which ranks the hospital as sixth in the central east region and the leader in Scarborough. This indicator may be reflective of the high-need community in Scarborough with its low income, elderly, large immigrant/refugee population who has minimal supports available to them (1991 Census).

To expand services to the community, Scarborough General Hospital hired a child psychiatrist and implemented new programming for children including a mood disorder clinic, an attention deficit hyperactive disorder (ADHD) clinic, a developmental screening clinic, child abuse services and emergency services. Work is also in progress with the Canadian Mental Health Association to develop a transitional youth program. The hospital is also recognized as the ethno-cultural leader in Scarborough, being the only hospital to participate in the Multicultural Access Project of Scarborough, funded by the Ethno-Racial/Aboriginal Community Access Fund.
In April 1997, the Executive Committee of the Ontario Hospital Association (OHA) invited a team of management researchers from the Richard Ivey School of Business (University of Western Ontario) to examine restructuring in Ontario hospitals. The study was to address three questions related to hospital restructuring in the province:

- Can Ontario’s hospitals be restructured as proposed by the Health Services Restructuring Commission during the next two years;
- If so, what are the key conditions to permit this successful change;
- If not, what conditions would permit a successful adaptation?

Faculty researchers from the Ivey team developed 12 case studies from three types of hospitals: small, community and teaching. These case studies examined best practices across the hospitals’ operations: governance and management structures; work reorganization/business process re-engineering; and change management. The case studies included hospitals which had undergone significant change either through forced mergers and/or amalgamations as well as hospitals which had voluntarily chosen to initiate significant change processes on their own. A group made up of an expert panel and an internal OHA steering committee selected the hospitals for the review. Hospitals were chosen either because they had approached the change process in an innovative way, gaining recognition as being a leader in this area, or because they had been less successful and were recognized as having faced significant challenges or barriers leading to limited...
success in achieving their desired outcomes. It is important to note that Scarborough General Hospital was chosen for review because the hospital was viewed externally as having been pro-active and innovative in its approach to change and quite successful in achieving key results and targeted outcomes.

In general, the official results of the report indicated that in the opinion of the researchers, restructuring couldn’t continue at the current pace and under the present conditions. In approximately four hundred interviews, front line workers, middle managers, senior executives and board members supported this viewpoint. The main issues and concerns identified were: a decline in hospital services (less nursing time per patient); less palatable food; lower levels of cleanliness in facilities; high employee stress; slow recording of patient data; and reduced patient supervision. From the interviews, three key areas of concern emerged. The first were *Time issues* - trying to accomplish change too quickly resulting in very short time horizons, limited ability to plan which resulted in less than optimal results. The second were *Financial issues* - continued budget reductions at the very time that systems are being redesigned and realigned which often resulted in the loss of employees with the skills necessary to implement the changes. The third was the *complexity of the process* - multiple layers of change occurring all at the same time while hospitals must still maintain ongoing patient care and services, or business as usual.

The Ivey study recognized that many of the restructuring initiatives were executed in a very professional manner despite the lack of additional funds, poor data on costs and outcomes, very little assistance from external sources such as the district health councils,
and numerous complications caused by different interest groups. The report stated that the each hospital’s perceived future state or vision played a significant role in what strategy the hospital would use to determine the future range and volume of health services and how these services would be provided. There was also indication that to achieve organizational alignment, it was not necessary to be the organization with the best sub-systems (e.g. the most advanced information systems) across the board but rather to have sub-systems that supported each other and fit the hospital’s strategy. They decided there was no one best structure (department based, patient centered, etc.), but that the structure chosen must fit and be compatible with the other organizational sub-systems in the hospital.

It is interesting and encouraging that the seven key steps identified by this research team in 1997 (as being the ones that effective change management programs had in common) were identical to the process steps identified by Scarborough General Hospital back in 1995. These steps were recognize a performance gap; develop a vision; prepare for change; build support; implementing the change; realign the systems; and reinforce and sustain the change. The Ivey team noted that while all seven steps were part of the process in all of the hospitals reviewed, it was observed that not all steps were executed equally well in all hospitals.

According to the Ivey report, Scarborough General Hospital had done well on most of the steps as compared to the other hospital studied. The team observed that, at Scarborough General Hospital, awareness of the current and impending performance gap
was mainly within the senior management level and was less wide spread among the staff levels. Another shortfall the team identified for the hospital was the failure to engage in assumption testing, specifically as it applied to the information technology vision. The hospital’s management group had assumed that physicians would welcome the system and failed to test this assumption. This failure to communicate with all stakeholders and gain commitment resulted in considerable loss of time and additional expense. This was very true, since it was well into the implementation phase that the hospital discovered that the system did not meet the expectations of the physicians, was being rejected by many staff as not being user friendly, and was not progressing as scheduled. This required a backtracking and a slowing down of the implementation process in order to redesign components of the system to better meet the user needs and allow more time to address the learning curve required by the various user groups.

This reflects the relevant literature that points out that the recipients of change must recognize the need for change before their cooperation can be expected. In the fall of 1997, a strategy used by SGH to overcome this barrier was to enlist the help of the medical chief of staff and other respected physicians to help champion the change and gain support for its implementation. With the help of physician champions, a slower pace for implementation, and revisions to the system based on feedback for the user groups, it is anticipated that most of the barriers to successful implementation have been addressed. This will have to be carefully monitored and with frequent communications to ensure this is in fact the case.
In terms of leadership, three characteristics were cited by the Ivey team as being especially critical for the success of restructuring - creativity, credibility and confidence. It was noted that Scarborough General Hospital had two senior vice presidents who were regarded as change leaders on the basis of their high degree of credibility and trustworthiness in the minds of those who were ultimately responsible for implementing the hospital’s change initiatives. The hospital was recognized for its ability to “learn-by-doing” demonstrated in its earlier major CQI initiatives and the review team concluded that this had served as a method of teaching the organization how to manage change. Reference was also made to the hospital’s CQI process as an effective planning tool that helped lay out the sequence of events for the change process. It was felt that these earlier CQI processes allowed time for leaders to achieve credibility. It also allowed time for skills to be developed throughout the organization, as well as time to experiment with learning to determine which processes worked well and which process were not as effective in achieving targeted outcomes.

The Ivey team recognized SGH’s fast track teams as a good method of presenting early successes to the organization, countering skepticism and building confidence that these working teams could achieve challenging changes. The hospital’s efforts to provide education and support to the remaining management level, who were seen to be stretched beyond their experience, though not necessarily their capabilities was given positive support. It was felt that money for training was very important especially when change processes involved the reorganization of work, the creation of new positions, and the
redesign of current processes. Another strategy that was recognized as being effective in supporting staff in their new environment, was the hospital’s buddy system. This system paired an inexperienced staff member with an experienced one and was used to support staff in new and unfamiliar areas, teach the necessary skills, monitor progress and provide readily available expert resources.

The Ivey report also identified management’s ability to devolve decision making down to unprecedented levels within the organization, a critical factor in managing change. This willingness of management to share control over decisions, coupled with problem solving at the lower levels of the organization, allowed processes to be re-engineered by those closest to them, who understand them best, and increased the likelihood that the changes would be supported. Positive mention was made of the collaborative efforts observed on the part of the interdisciplinary care team as it applied to the patient centered care initiative. The team provided comments on the hospital’s ability to integrate cost information with patient care information in an effort to evaluate effectiveness of changes in achieving desired outcomes.

The Ivey report concluded that the amount of time hospitals have had to become proficient at managing change is an important determinant of the smoothness of the change process. Time appears to be important because of the role it plays in allowing hospitals the opportunity to develop the needed leadership characteristics, resources, and capabilities to support the change process. Time gives leaders the opportunity to develop the credibility and the confidence that enables them to lead their organizations through the
change process effectively. Time permits the organization to develop a number of critical capabilities such as allowing front line staff and managers opportunities to develop decision making and problem solving skills. Sufficient time also ensures that middle managers are better able to acquire the broad range of planning and resource management skills (staff redeployment, multi-skilling, teamwork) so necessary for effective change management.

Having stated the importance of time, it becomes even more relevant that, during the course of the field interviews a frequent theme was the critical lack of time hospital managers felt they had to cope with the changes they faced. There was a consistent sense that there was no time to reflect and no time to ensure that the selected process changes were the right changes and were achieving the desired results. Managers’ overall sense of being physically stressed with decreasing levels of job satisfaction was prevalent in most of the hospitals. The study reported formerly competent managers being depressed, demotivated, and above all exhausted. It was recommended that time was needed to allow for the redesign of underlying processes of service delivery, rather than simple slash and burn attempts to cope with budget reductions. It was also recommended that effective management of change required good information upon which to base decisions and adequate resources to train employees to assume new roles. If these conditions are not present even the most effective hospital leaders would have difficulty managing change.
Academic Alliances and Partnerships

Another external indicator of the hospital’s recognition and reputation has always been its academic alliances. Scarborough General Hospital has maintained a long history of affiliations with the University of Toronto, Ryerson Polytechnic University, and several community colleges for the teaching and practice training of medical students, family practice residents, general surgery residents, nurses and other health profession students. The hospital has enjoyed a 26-year agreement with the University of Toronto for the training of medical students and in 1996 achieved a formal alliance with the Fitzgerald Academy of St. Michael’s Hospital. The hospital’s medical teaching role includes a Family Practice Teaching Unit, which handles up to 20 full-time residents annually and 25 clinical clerks. Senior residents in general surgery have three and six month placements at the hospital during their third and fourth years. Each year over 1,000 medical and other health profession students receive training at the hospital. The quality of this training is reflected in the consistent praise from the students and residents in their evaluations of the programs offered.

In research, Scarborough General has been selected to participate in selected, multi-site clinical research studies in cardiology, oncology, internal medicine and psychiatry. New methodologies and care protocols have resulted from many of these research initiatives. Examples include the previously discussed “myoglobin and time to
thrombolysis" studies which greatly improved the ability to diagnose and treat cardiovascular patients and has been recognized as a first-in-class initiative.

The need to maintain access and scope of services, along with the need for improved efficiency and effectiveness in care delivery, prompted SGH’s efforts in the direction of partnerships, alliances, and joint ventures. Initiatives discussed earlier involving Scarborough General Hospital in conjunction with North York General Hospital and the Scarborough Grace Hospital resulted in successful implementation of a regional shared laboratory service (The Shared Hospital Laboratory Inc.). Scarborough General Hospital also established a formal alliance with St. Michael’s Hospital for joint programs in dialysis, vascular surgery/cardiac catheterization, and clinical trials and research. Other innovative alliances established by SGH included:

♦ the Canadian Mental Health Association and New Dimensions for the provision of client-centered community-based mental health services (improved access);

♦ Scarborough Grace Hospital whereby Scarborough General provides the Occupational Health and Safety services to the Scarborough Grace Hospital (increased non-Ministry of Health revenue);

♦ Spectrum Health Care for the provision of fee-for-home health services for patients who do not qualify for Home Care in order to facilitate discharge planning (more efficient use of the hospital’s beds);

♦ Meadowcroft retirement home to facilitate early and safe discharge from hospital for patients needing alternative levels of care (more efficient use of hospital beds);
Centenary Health Centre and St. Michael's Hospital whereby Scarborough General purchased cardiac catheterization procedure time blocks in order to provide timely services to the patients in a cost effective manner (improved access and scope of services);

- Shared medical photography service with Toronto East General Hospital and shared biomedical technology service with Centenary Health Centre (increased service efficiencies);

- Agreement with the Hospital for Sick Children to be part of a multi-centre Asthma Education Network (improved access and scope of services).

To maintain service levels with reduced funding, the hospital also recognized suppliers as partners and put into place a process whereby they would be selected through working committees made up of internal user groups or stakeholders. To ensure quality was maintained, products were used on a trial basis and results documented on standard product evaluation forms. The purchasing department also checked vendor references before a vendor would be awarded hospital business. All vendor selections were based on the fit between the company and the hospital, past performance, and feedback from other users. An example of how this process was beneficial to the hospital and resulted in improved cost savings while maintaining quality, was the request for proposal for the new haemodialysis equipment. Five firms were selected and requested to make presentations on their haemodialysis machines. They were judged on the basis of how advanced their technology was, whether it was end-user (nurse) friendly, and how the cost compared on
the basis of ability to provide quality patient care. An innovative contract was negotiated which included having a technician from the firm on-site to do regular maintenance on the equipment, regular equipment updates as technology improved, and significant cost savings for the hospital.

Over the past couple of years (1994 - 1997), Scarborough General Hospital has invested heavily in technology that simplifies the administrative tasks associated with patient care. Information is now provided on-line or in print for the admissions, billing, laboratory, pharmacy, diagnostic imaging, operating room management, health records abstracting, payroll/personnel, materials management and accounts payable processes. The introduction of the Meditech Executive Support system has allowed timely on-line assessment of financial performance, volumes and workloads. E-mail and voice mail have made it possible to substantially reduce communication time and speed up the decision making process.

In August 1997, healthcare professionals began using hand-held devices at the bedside to enter data and place orders. The hospital’s goal is to achieve a complete electronic patient record by the year 2000, including integration of data, image and voice technologies. The biggest barrier to achieving full implementation of the Meditech modules to date has been the resistance of the medical staff. When this was followed up, this resistance was attributed to lack of sufficient consultation with key physician groups and a perception that the computerized systems were not able to meet their needs as users. These issues are currently being addressed by redesigning screen layouts and customizing
report formats to make patient information easier to retrieve and easy to use. It is hoped that with a more phased approach to system implementation, the hospital will be able to achieve successful implementation for the remaining modules.

A second barrier identified was the fact that nursing staff were overburdened and their need for an extended learning curve to allow them to acquire the skills necessary to utilize the system fully and benefit from it. The heavy workloads on the patient care units prolonged the required training hours necessary to bring staff to a comfort level such that they could use the system effectively and have it facilitate their patient care rather than hinder it. Adult education theories already discussed, (Brookfield, 1987; Cranton, 1992; Knowles, 1984; Kolb, 1984), although recognized early on in the change process, were not applied as effectively as they might have been. The pressures to achieve change in the shortest time possible, for as little cost as possible, resulted in a failure to adjust implementation time frames to meet the learning needs of the staff and allow them time to effectively practice new skills.

Limitations

Limitations of the Study Design

In completing the meta-analysis to evaluate the effects of Scarborough General Hospital's efforts to accomplish a new organizational structure and process redesign,
objective data (both internal and external) supported the conclusion that the organization has been successful in achieving many of its strategic objectives. It is important to stress the use of objective data from available reports rather subjective observations provided the basis for the critical discussion and conclusions within this study.

As stated earlier, personal location as the researcher for this study included being employed at Scarborough General Hospital throughout the change process. Through assigned responsibilities, there was an integral involvement in most of the change initiatives undertaken. Due to this intimate involvement in the process being evaluated, it was very important to ensure that no researcher bias was introduced into study. This was achieved by designing a meta-analysis based on existing longitudinal data that adhered to external collection and reporting criteria. No new data was generated for the purposes of this study. Instead, existing internal and external documents and reports were utilized to provide data elements (qualitative and quantitative) that could be applied to the study’s research questions. No manipulation of the data was used other than grouping the data elements into appropriate tables and figures to support discussion and conclusions. Based on the study design, it was felt to be a fair, objective critical evaluation of the overall change process.

In conducting this study it became increasingly clear that large amounts of data were available but the targeted data was difficult to collect, hard to compile, and difficult to apply to selected criteria for which it had not been specifically designed. External reports and summaries helped provide objective assessment that the hospital was
successful in continuing to provide quality full-range services in a cost efficient manner sensitive to the needs of its community. However, these reports did little to capture the human resource side of the changes. There was no effective mechanism (internal or external) to capture the impact of these changes on the way in which staff perceived their work, levels of job satisfaction and ability to cope in terms of measured stress levels. The fundamental question of “have we really improved our system or simply made change for the sake of change” could not be answered fully from a staff perspective.

Measures of patient satisfaction were also a problem as applied to the change process. The hospital had used the Conference Board of Canada tool for several years. While it allowed comparisons over time, as well as comparisons to peers who were also using this tool, there were areas of inquiry related to specific aspects of the hospital’s internal change processes that were not fully addressed. The hospital used some focus groups and post-discharge surveys as additional ways to better capture and understand customer needs and levels of satisfaction but these were sporadic and not well coordinated. If the change strategies are to be linked to outcomes and levels of patient satisfaction than this is one area that must be addressed in future evaluations.

Another objective of the change initiative was achievement of a new organizational structure: a flatter structure with far fewer management staff with a mix of leadership and management responsibilities. This study did not evaluate the appropriateness of this mix of responsibilities nor the ability of individuals to meet expectations and achieve desired outcomes. As the organization has become leaner and meaner fewer staff are available to
accomplish the workload, lead or participate in change projects, and ensure timely implementation of the various systems and processes. As indicated, due to the limitations of this study, the human resource side of the change was not adequately investigated and represents an area for future research.

The issue of visible leadership was another area that the hospital needs to address. Staff should understand why changes are being made, how they will be impacted, how they can be involved, and how can they provide feedback and feel they will be listened to. This area of leadership effectiveness was one that the current meta-analysis was not able to adequately address, but one that would have provided meaningful insight into the lessons-to-be-learned category.

The types of employee surveys that are currently part of the organization’s review process do not include questions around the change process. There is no formal tracking or monitoring mechanism that feeds information regarding levels of satisfaction, stress, ability to cope etc. back to the senior management level and no mechanism that ensures adequate follow up and actions occur. Once again, this study was not able to capture this type of information and therefore it becomes another focus for future research for the organization. Sadly the human resource aspects of the change are silent and largely unobserved phenomena. It is this next level of assessment that needs to be captured in order to determine staff satisfaction and the effectiveness of the training programs in meeting the staffs’ learning needs.
Limitations of Scarborough General Hospital’s Change Process

Based on the use of the existing longitudinal data base it is appropriate to say that the hospital has successfully achieved a new organizational structure, significant process/job redesign and bed reductions, while still maintaining its quality, access, and cost efficiency criteria. While the hospital could be termed a winner since it will continue to provide a full range of acute care services, as well as being designated as a regional centre for dialysis and MRI, there are many key issues that need to be recognized and addressed if it wishes to maintain its leadership position in the future. A more comprehensive internal evaluation of the many change initiatives undertaken by the hospital is urgently needed. These evaluation methodologies must be specifically designed to allow causality to be determined and must provide more definitive answers to questions around access, quality, and costs as well as provide feedback on performance measurement indicators. One area for improvement involves the hospital’s frequent failure to summarize and apply available information, and what was learned, directly to the relevant situations. These, as well as other situations, are currently being addressed in many service areas in order to improve the hospital’s ability to identify customer needs, identify improvement opportunities, and evaluate outcomes.

Because the hospital viewed leadership as critical for success, senior management sponsors had been designated and assigned to lead and champion the various change initiatives. Most of these individuals contributed significant amounts of time and energy to
mentoring staff and attending the many committee and task force meetings. They also maintained a reporting relationship to keep the senior team and the board informed of progress. In spite of this activity, there was a widely held view, on the part of staff and some management, that senior leadership needed to be much more visible. This view was also reflected in several of the external review summaries and was an item of concern in several staff survey reports. There is no question that the hospital needs to address how to make this leadership more visible. Staff should understand why changes are being made, how they will be impacted, how they can be involved, and how can they provide feedback and feel they will be listened to.

Empowerment of staff has been frequently cited in several of the hospital’s external reviews as being a tangible outcome of the change initiatives. This empowerment is evident in the many staff who assumed significant leadership roles in the change projects. While these are extremely positive outcomes, they only apply to a select number of individuals. Unfortunately, for many other staff there is a disturbing and powerful theme in many of the focus groups, task force minutes and in individual discussions that they are not being listened to. There is a perception that they are not true partners, and are powerless to stop changes that they view as not being beneficial to patient care. There is a sense that as an organization the hospital has a history of always doing too many things at once and doing them too fast.

This is a difficult mind-set to change, since the hospital also has achieved a reputation of successfully achieving almost anything it undertakes and as a result has
empowered many staff with a sense that anything can be accomplished. This was clearly identified in both the Canada Awards of Excellence report and the Ivey School of Business report. The key point is that, yes, the organization has an ability to mobilize its resources and achieve results, but at what cost to its employees? As the organization has become leaner and meaner there are far fewer staff to accomplish a workload that has remained stable or in many cases has grown substantially. In addition to this regular workload, staff are also expected to continue to lead or participate in change projects, and ensure timely implementation of the various systems and processes.

Another objective of the change initiative was achievement of a new organizational structure: a flatter structure with far fewer management staff. The mix of responsibilities included a blend of leadership and management with a large component of the management requiring involvement in the day to day issues, leaving little if any time for the leadership components of mentoring staff, leading projects and evaluating effectiveness and outcomes. There is also the issue of the dyad co-leadership model within the new organizational divisions. This co-leadership structure has succeeded in greatly increasing the participation of the physicians in the planning activities of the organization but, in reality, has done little if anything to lessen the workload of the non-physician co-director in the running and management of the division. When divisional reports are presented, the physician director almost always presents them, but the non-physician director with varying degrees of input from the physician in fact prepares them.
There are two issues that appear to be the root cause of this limited participation on the part of the physicians. One is the age-old item of financial reimbursement, and the other is simply lack of formal knowledge and skills in the area of finance, administration and management. The physicians are paid a stipend for their role as divisional director but this stipend is not comparable to what they would be earning if they were billing for their time. As a result, there is a limited amount of time and energy they are willing to expend on fulfilling the duties of this role. If this role is to become truly effective the hospital will have to find alternative payment methods that are satisfactory to the physician group and are still affordable to the hospital.

The other larger issue is the lack of formal preparation of physicians for the administrative role. While courses are made available to physicians (paid for by the hospital) there is difficulty getting all physician directors to attend or up to a level where they understand the relevant key issues. Issues such as funding structures, the implications of weighted cases and cost per case, and the labour-relations issues that impact on how the organization must function. The natural outcome of this situation is that the non-physician director must manage the bulk of the work. This increases the stress on this group of managers in a structure that has increased demands over a narrower range of people.

The feelings expressed by many of these management staff are those of being overloaded, being on a treadmill and never feeling they have fully succeeded. There is a high level of stress and a degree of burnout, but there is also a strong sense of not being
able to vocalize these feelings for fear of job loss or being labeled by the organization as not able to cope and not being a team player. There is a very strong opinion that the senior leadership of the organization generally do not want to hear about the problems associated with the changes, they do not want to be directly involved in resolving issues and they do not want to hear that certain initiatives are not working. There is a strong message that individuals in charge of the various change initiatives are the ones responsible for making it work, and if there is failure to do this, than the fault must be on the part of the individual as opposed to the system.

These themes were identified in the process of this study, but there is no formal tracking or monitoring mechanism that feeds this type of information back to the senior management level and no mechanism that ensures adequate follow up and actions occur. The types of employee surveys that are currently part of the organization’s review process do not include these types of questions and do not address the specific issues around the change processes. It is only logical that if you do not ask the questions, you will never receive the information. This is perhaps a conscious strategy to prevent having to take action on difficult issues, but a strategy that if not corrected, will result in staff who feel powerless and an organization that will not be able to meet its full potential.

Much of the process redesign has centered on the redesign of job functions, the expansion of roles, and the appropriate education of staff to assume these new roles. As already stated many of the problems identified centered on the very tight time frames for implementation. The continual downsizing and cost reduction initiatives were occurring at
the same time as the change initiatives, and staff found it very difficult to achieve a balance between the two. To help illustrate this point, registered practical nurses on a unit had to learn new skills as part of their expanded role in addition to maintaining their regular patient assignments. New responsibilities included giving medications, doing simple dressings, and using the new patient care module of the Meditech system which required documentation on-line at the bedside using the computer.

It is important to recognize that these changes were occurring in an environment where staffing had been reduced, management supports had been reduced, and routine workload had been increased. There has been a failure to take into account the additional workload as a result of the training and learning requirements associated with the new systems being introduced. It is not difficult to understand why many staff resist learning and acquiring the new skills associated with the change strategies. Given the average age of the hospital’s employees, many were hoping for a stable work environment in which to finish out their careers. Instead they are being bombarded with even heavier workloads, expanded scope of practice, increased responsibilities, increasing demands from the patients and families, all with no monetary recognition and little if any expressed appreciation for their efforts.

If one were to simply evaluate the SGH’s changes by the financial and statistical indicators and not look beyond, there is the temptation to paint a far more optimistic picture of the success level and outcomes being achieved. It is this next level of assessment that needs to be captured in order to determine staff satisfaction and the effectiveness of
the training programs in meeting the staffs' learning needs. It is this level of assessment that has not been adequately designed or consistently applied within SGH’s change so as to be able to identify trends, needs, and levels of satisfaction.

Strategic planning had been identified as another critical element for success. It represents another category where opportunities for improvements that were not adequately addressed can be identified. The organization needed to develop methodologies to better link strategies and outcomes in order to be able to determine causality. In many cases the outcomes may have resulted from the change initiatives but they also may have resulted from a variety of other impacting factors. The use of predetermined evaluation criteria and performance measurement indicators would help address this issue. There should also be improved utilization of existing information systems that track and report on a wide range of financial, productivity and quality indicators at the level of individual patients as well as at the division and corporate roll-up level. There is a wealth of longitudinal data that could be better utilized to provide a system evaluation of the impact of change. A clear understanding of how actions impact outcomes must be achieved through appropriate use of data. It is clear that in today’s environment, information and knowledge are power, and the ability to access and communicate information clearly and in a timely way is vital.
CONCLUSION

This study does much to validate the thoughts and works of previous authors while still offering some counter arguments to support creative approaches to change and leadership in today's organizations. The results of the study (supported by existing, objective, unmanipulated data) indicated that Scarborough General Hospital's change initiatives were pro-active, creative and very effective. In answer to the research questions of this study:

- patient's access to services was maintained;
- scope and range of services were maintained and expanded in certain areas;
- quality of care was maintained;
- satisfaction measures remained within acceptable levels; and
- financial viability was maintained.

In terms of the academic community, the results of this study confirm the position of some authors and offer alternatives to the thoughts and theories of others. The study agreed with the position statement of Parsons and Murdaugh (1994) by concurring that the key driver for change in the health care sector continues to be the need to provide high quality care while minimizing expenses and maximizing satisfaction. There is clear evidence that the status quo ceased to be an option in the face of funding reductions, bed reductions, and HSRC directives. The study results are also consistent with the work of Deveau & McCabe, 1996; Majchrzak & Wang, 1996; Peregrine, 1997, who identified that
a collective sense of responsibility within the organization, coupled with a change of culture, was required to support the new paradigms that accompany extensive change initiatives. The importance of this collective sense of responsibility is also consistent with Fullan’s (1993) view that the complexity, dynamism, and unpredictability of most change processes requires that each individual person must be a change agent and expert in the dynamics of change if the whole is to succeed. Much of Scarborough General Hospital’s success could be attributed to the extensive organizational commitment to the change process and the involvement of key staff at all levels.

The TQM/CQI approach adopted by SGH included team problem solving and presupposed collaboration and joint achievement of the primary goal of continuing to provide quality service to the patient. This was achieved through strategies as described by Dubnicki & Williams (1992) and included a flatter organization, empowerment of staff, and a patient centered approach to care and service delivery. This study also confirmed that staff really do want leaders who possess qualities as described by Kouzes and Posner (1987). Qualities that include honesty, competence, forward thinking and credibility. The leaders of SGH’s change process were similar to the ones described by Nanus (1992) in that they took charge, made things happen, and translated the dreams of the vision statements into reality. They were able to deal with complexity, ambiguity, and uncertainty and were able to use innovative methods to achieve solutions to many of the problems facing the hospital. Similar to views expressed by Flower (1995) and Fullan (1993) SGH recognized that there is never one autonomous person at the centre of the organization
that makes things happen. Rather it is Fullan's "personal purpose" that is the key to organizational change – the ability to use individual talents and strengths and tap individual leadership capabilities. This was consistent with Conger and Kanungo (1998) and their definition of empowerment as a method of capitalizing on the skills and abilities of the organization's employees. It was the basis of SGH's strategy to empower staff and develop a "can do" attitude that allowed innovation and achievement of positive outcomes.

One area of conflicting viewpoints involved the need for planning to guide the hospital in its change process. Minzberg (1994) and Fullan (1993) were opponents of the need to have definitive strategic plans while Hamel and Prahalad (1989) and Kearns (1996) viewed various types of planning as an integral component of achieving desired change. Scarborough General Hospital began its change journey with a plethora of visions, plans and strategic objectives. It very slowly moved along the continuum to the point where there was a growing appreciation that more flexibility was required and that a blend of plans and spontaneous reaction was the desired way to go. As Fullan (1993) points out, organizations must fight between over control on the one hand and chaos on the other. For organizations in the midst of change this means finding the balance between strategic planning and the ability to be agile and able to respond quickly and in a variety of ways. SGH's change was consistent with Fullan's view that change is non-linear and involves multiple innovations that are implemented simultaneously. It is easier to recognize and
agree in hindsight that “the route and destination” must be discovered as part of the journey.

Brookfield (1986) and Kolb (1984) provide much insight into how adults learn and make sense of their environment. It is important therefore to be aware of why and how adults respond to change, learn new skills and cope with the stressors of change. The Myers-Briggs typology also helped the organization to understand how and why individuals responded to change the way they did and how to best support them during this very stressful time. There is a belief that individuals respond to dramatic change, such as a major organization restructuring and process redesign, much in the same way they respond to death and dying. There are generally though to be four phases to the transition process: denial, resistance, exploration and commitment. These phases seem to apply to change in general whether it is at the individual, group, or organization level. There is an adaptation process that requires time to go through various phases. Focus and attention moves back and forth from the past (in terms of the way things were) to the future (in terms of the way the have become or might be).

At SGH the first phase of denial was the stage where the true meaning of the change had not penetrated and the result was a sense of numbness for many of the staff. This stage is potentially harmful to the success of the change since it keeps individuals from moving forward. They stay focused on the past, the way things were, and are not able to explore or accept the benefits of change. This phase can be prolonged if appropriate outlets are not provided. As pointed out in this study, staff must feel free to
express their feelings of loss, fear, and uncertainty in an open environment without fear of reprisal. If this does not happen staff often mask their true feelings leading management to believe that the change is more successful than it really is.

In the *resistance* phase productivity usually decreases. At this stage staff focused on the personal impact the change was having on them. It is important to understand that grumbling, increased use of sick time and increased use of services such as the employee career resource centre is common. Projects grind to a halt at this stage as staff use a variety of resistance techniques to try and vent their frustration, fear, anxiety, and self-doubt as to their ability to cope with the change.

*Exploration* was the next phase and was accompanied by a renewed interest in what was happening. A shift occurred from focusing on the past to focusing on the future and new staff energy was present to help create ways of moving forward. In this stage staff used their prior knowledge and experience to help contribute to change strategies and find solutions to problems. Team building occurred at this stage and some people stated that they found this stage exhilarating. Chaos theory can be applied to this phase since everything is open to question and discussion and there are few restrictions on how the change can be achieved. Access to current relevant information is key to this phase in order to support good decision making and ensure the change is appropriate to the new environment.

The last phase is reaching commitment. After questioning past practice, exploring future opportunities, and experimenting with possible solutions, staff are ready to move
ahead. They are ready to refocus and follow the plan, they want to get on with the change and achieve the desired outcomes.

In this study, the denial phase started with the announcements that heralded the end of the old organizational structure and the traditional way patient care and support services were delivered. Staff were angry, sick time had to be closely monitored and frequent staff forums were required to keep the communication lines open. The resistance phase was the time between when the old structure ended and the new structure began and impacted much of the work of the change teams. This was the time when jobs were being changed, work processes were being redesigned, and new roles were being implemented all within a new organizational structure. Resistance was particularly evident from some of the union groups and often resulted in prolonged time frames to achieve desired outcomes.

The phase of exploration occurred during the redesign team process and involved much of the CQI and “out-of-the-box thinking that resulted in many of the change strategies. It was during this phase that some staff took on a real leadership role and showed a high degree of creativity in their problem solving approach. The final phase of commitment and acceptance of the new structure and redesign, an ability to identify with it, feel comfortable with it, and see it as a positive change, is still not completed. There are still parts of the change initiative that have not solidified and have not been tied back into the strategic plan. This will occur but it will need continued support from the hospital’s senior team and adequate resources to ensure it is a sustainable change.
Often in major organizational changes, time and energy goes into the planning and implementation of the change with little, if any thought, going into managing the transition and evaluating the outcomes. There is a general failure to recognize that change is often more about altering the human or cultural paradigms, the way in which people go about doing their business, than it is about the structural and process changes (Fullan, 1993). There are human resource issues connected with restructuring and consolidation. The resistance of individuals to change must not be underestimated. The level and tenacity of this resistance demand that an incredible degree of transformation is required: transformation that takes time, resources and leadership to accomplish.

Often, the problem is not with the change initiatives themselves, but rather with the transition phases and the ability of staff to accept the outcomes being achieved. While SGH’s change strategies varied, the transitional phases in each show a remarkable similarity to one another. There are two aspects to change - the external change process itself and the individual internal psychological response process. The external change starts with something new while the internal psychological change process that accompanies this change always start with an end or closure to an old reality and the personal identity that went with it. It is only after individuals have been successful in achieving their own personal closure that it is possible for them to achieve a new beginning. This does not happen immediately, it takes time. During this period individuals exist on a level that is not clearly defined, their old identity is gone and their new identity has not taken hold yet.
There is a need for a transition management plan - a way to manage the endings, the neutral in-between stages, and the new beginnings.

As stated earlier, Scarborough General Hospital was able to accomplish substantial change through a clear vision statement, a comprehensive strategic plan that clearly identified the actions required to consolidate the new structures and processes. To operationalize the vision, a strong expanded senior or corporate team was put in place, along with the new organizational structure, and committee structures to support the new model. Within the context of the emerging vision, Scarborough General Hospital affirmed that the directions to be taken had to be client-centered. They must nurture participation from key players, must build on partnerships with other major provider groups and must support the ability of the hospital to compete in an increasingly competitive marketplace. There was also a recognition that there was no room in the change process for reluctant leaders; the goals were clearly stated and the expectations for achievement set high - improve health care delivery and the efficiency of the system while maintaining or improving the quality and accessibility of services.

On most levels the hospital achieved a fair level of success. The changes to date have allowed the hospital to function within budget and the impact on the quality of patient services appears to be acceptable. It successfully maintained its volume and scope of services, and it received good reviews on its change initiatives from several external review bodies. However, what hasn’t been effectively determined is the impact of the many changes on the morale and job satisfaction of the staff. Unfortunately for this change
project, like many others, there was a lack of planning around evaluation methodologies that would allow a before-and-after comparison of the various change strategies. This resulted in an inability, based on the information available, to imply causality between specific change strategies and individual outcomes.

Areas of opportunity for the hospital included better utilization of the vast amount of longitudinal data available within the organization. This extensive database could be used to better support evidence-based decision making, planning, and funding requests. Recent advances have been made in this area with the purchase of various software systems that allow integration of databases and application of this comprehensive information to a report-writer technology. This allows trending and comparison of data over time that will assist in determining priority improvement initiatives for the hospital.

Wheatley (1994) writes that dissipative activities, that is, activities that disperse or result in the breaking up of existing structures, can play a constructive role in the creation of new structures. These activities can play a vital part in the process whereby current systems give way to emerge in new and revitalized forms that are better suited to the demands of their changing environment. This is supported by Parsons and Murdaugh (1994) who point out that “customer expectations, market pressures, and increasing clinical demands have necessitated a rethinking of how services are delivered” (p. 4). There are untapped opportunities, when a system is in a state of disorder or disequilibrium, for organizations to use this energy to create the solution. The disorder that created the problems can in fact be used to create the solutions. This sentiment is also
reflected in the work of Grace McGartland (1996), a training consultant who feels that organizations rarely capitalize on the energy or power of the human imagination to leap forward and create a solution. Most organizations typically halt or stifle breakthroughs before they have even begun, and fail to recognize the need for a balance in creative and analytical thinking in order to successfully rethink their processes, challenge their paradigms, and create new visions that better meet the challenges of their constantly changing environment. Organizations must learn to allow their employees to explore the full range of possibilities without fear of reprisal if they should fail. Many of industry’s current success stories involve employees who were given time and support to be creative.

This study contributes to the current literature by demonstrating how the meta-analysis process can successfully be used to critically evaluate multi-faceted organizational change initiatives. Through the use of quantitative and qualitative methods, an existing longitudinal database and relevant documents such as the minutes from selected committees can be reviewed, coded, and applied to predetermined research questions. This is particularly important for organizations that have not incorporated adequate evaluation methodologies in their change process and are therefore limited in their ability to successfully evaluate the impact of their change strategies. The meta-analysis approach requires an intimate knowledge of the organization’s function and the data elements being reviewed, as well as a clear definition of the research questions to which the analysis will be applied.
Hospitals, like many other organizations, maintain extensive databases that are audited regularly to ensure adherence to standards and the accuracy of information. In spite of the incredible amount of time and effort put into maintaining these information systems, most organizations do not fully utilize them to address critical questions and support evidence-based decision making. There has been an overall lack of evidence in the literature of any meaningful application of the full scope of these information systems. Many studies identify utilization of the database for information that is narrowly focused to address one aspect of care or service, but none have retrospectively evaluated an entire project or system change by applied the available database to selected evaluation criteria.

This is important, since by using a meta-analysis process and existing longitudinal databases, organizations would now be able to evaluate projects that may not have been effectively evaluated in the past due to poor evaluation designs. It demonstrates the enormous abilities that exist to combine data elements, which at the micro level may not be meaningful, but through the grouping process and focused application at the macro level, provide a comprehensive approach to the assessment and evaluation of multi-faceted change processes.

Organizational redesign that is not well managed over the long term results in significant disruption to patient care, reduced access to services and a decrease in the quality of care. Factors affecting successful implementation of change include stability of funding, commitment of adequate resources to support the change initiatives and ability to co-ordinate and link the individual change initiatives into one overall change design. This
study attempted to focus attention on the complexity of the health care system and how ongoing patient care requirements do not allow change initiatives to be conducted in isolation from the daily demands of providing care and service. This places additional stress on the staff and requires appropriate planning. Fullan (1993) discusses the need for allowing adequate time to achieve the desired change but the literature in general does not clearly distinguish the difference between the time frames appropriate for change that involves straightforward process redesign versus change that requires role redesign. Change that involves role redesign means change that impacts people: the way they function, the way they think, and the way they interact. This type of change requires significantly more time since it must adhere to adult learning principles and must allow for a new organizational culture to be established. Changes that involve the learning of new skills to assume new roles, or the learning of new skills to expand a current role, is more time intensive than changes that simply redesign the flow of work or change the sequencing of events. When change must be internalized and made part of an individual’s new paradigm, it takes longer and should not be further complicated by simultaneously layering it with other changes. Learners need adequate time to apply new skills, evaluate the results, and solidify their new experiences if the change is to be sustainable. This was clearly demonstrated in the problems SGH’s registered nurses and registered practical nurses experienced by trying to simultaneously achieve expanded scope of practice, cross-functional teams, computerization skills and empowered decision-making. Most staff faced
with the multiple demands of the current work environments need the added stability of adequate supports if they are to cope effectively with change.

A planning model for the time required to achieve change should provide for the type of change required (process, people, structural), the level of skill enhancement required, the number and types of organizational supports available, other initiatives occurring at the same time with potential to impact, and finally barriers that must be addressed to achieve the change process. This study suggests that successful change can be viewed as an inverse relationship between the time required to achieve it and the resources required to support it. As time frames are reduced, the number and types of resources required to achieve the outcomes usually increase. Conversely, if resources are minimal the time required to achieve the change appears to be greater. Other factors that impact this relationship are how well staff understand and accept the need for change, how progress is communicated, and how benefits of the change are perceived at the individual’s level as well as at the organizational level. If staff are truly committed to the proposed change they will often overcome obstacles and achieve outcomes despite inadequate time or resources. This is not a strategy that should be counted or used to excess since the long-term results are often a no-win situation with the patient being the one most impacted.
Summary

Scarborough General hospital was correct in its early assessment of the health care environment. External reports and reviews supported the hospital’s position that it had to move forward, had to reach beyond the boundaries of the organization if it hoped to become a vital part of the new emerging health care system. As identified in the literature, organizations that were autonomous and remained unconnected to the new network structures were at a disadvantage if they did not make dramatic efforts to change and integrate. Review criteria from the Health Services Restructuring Commission, the Metro Toronto District Health Council, the Canadian Council for Health Services Accreditation, as well as commissioned studies such as the one completed by the University of Western Ontario- Ivey School of Business, all emphasized the need to integrate hospital services with those of the community. For Scarborough General Hospital, its organizational and process redesign resulted in better integration and co-ordination of its levels of services (quaternary, tertiary and primary) and maximized its efficient use of resources. The rapidly changing nature of Toronto hospital services reinforced the urgency for SGH’s change, since the very nature of hospitals and the way in which they provide services was quickly evolving. The hospital was able to achieve greater shifts from inpatient to outpatient services, a shift to community-based services especially in its mental health acceptable.
The choice of a patient-centered model of care supported the hospital’s achievement of its preferred state and was consistent with its stated values and mission.

The restructuring of an organization and the redesign of its health delivery processes is a complex and challenging undertaking and has far reaching implications for patients, the community and health care professionals. While the desired outcomes appear to be simple – improving the quality and efficiency of care, the undertaking as identified in this paper was one of enormous magnitude. In spite of the recognized need for change, the identified vision, the clearly defined implementation plans and the quality outcomes achieved, there remains a need for longer-term plans to move the hospital towards a systems approach to the delivery of care and services. There remains a clearly defined need to align the hospital with the emerging integrated health enterprises while still maintaining a value system that is sensitive to the needs of the hospital, the community it serves and the broader components of the overall health sector.

The question changes from *are we doing things right* to asking if *the right things are being done?* This is not a journey that has a clear end, but rather an ongoing questioning and challenging of organizational values and processes in order to achieve new targets that meet the standards of quality. Organizational redesign that is not well managed over the long term results in significant disruption to patient care, reduced access to services and a decrease in the quality of care.
References


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Appendix A

Definitions

Academic Health Sciences Centre
Hospitals with formal university affiliations that have major research initiatives, provide substantial training for medical students and other disciplines at both undergraduate and postgraduate levels, and provide a comprehensive array of significant tertiary and quaternary care programs on a regional basis.

Acceptability
Each activity meets expectations of the patient/client, family, providers, and paying agency recognizing that there may be conflicting, competing interests between stakeholders and that the needs of the primary client are paramount.

Accessibility
Care and service is provided in an equitable and timely manner.

Acute Care
Care or treatment for illness or injury requiring concentrated attention by health care providers, usually for a short period of time.
Administrative and Support Services

Hospital functional centres that support other functional centres providing patient care, diagnostic and therapeutic services but do not directly deliver these services themselves.

Affiliated Teaching Hospitals

A hospital with an affiliation agreement with a University. This type of affiliation indicates compliance with Royal College of Physicians and Surgeons criteria.

Alternative Level of Care (ALC)

An ALC patient is a non-acute patient (does not require acute care services) occupying an acute care bed.

Ambulatory

Walk-in care - patients not requiring an overnight stay in hospital.

Appropriateness

Treatment is necessary and is delivered in the right manner by the right provider.

Cardiac Catheterization

Passage of a long, fine catheter through a blood vessel into the chambers of the heart as an aid in diagnosis and treatment of various heart disorders and anomalies.

Cardiovascular

A term that means, “pertaining to the heart and blood vessels”.

Care Pathways

A document to guide provision of health care to a specific group of patients in order to achieve desired outcomes within an expected length of stay.
Case Mix Groups (CMG’s)

Provides a way of aggregating healthcare data so that the hospital output is defined in a meaningful way for statistical analysis of hospital activity in Canada (CMG is a trademark of the Canadian Institute for Health Information). CMG’s identify groups of patients that are similar in terms of resources used as measured by length of stay since it groups acute care inpatients according to similar clinical and resource utilization characteristics with similar expected length of stay.

Catchment Area

The geographical area in which all or a majority of an institution’s patients/clients resides. This may be a special planning area defined by law and is not necessarily related to market share.

Chronic Care

Care required by a person who is chronically ill and/or has a functional disability, whose acute phase is over, whose potential for rehabilitation may be limited and who requires a range of therapeutic services, medical management and/or skilled nursing care plus provision for meeting psycho-social needs. The length of time required is unpredictable.

Clinical Protocols

Systematically developed statements to assist practitioners and patients with decisions about appropriate health care for specific clinical circumstances.
Community-based Care

Health care services provided to individuals and families by non-hospital based agencies such as home care, public health or community health centres.

Competence

Provider’s knowledge, skills and understanding of the patient/client is appropriate to provide the required care/service.

Consolidation

The bringing together of programs or organizations into a single site or entity.

Continuing Care

Care provided to patients in a manner that responds to their social, recreational, psychological, spiritual and health needs. Patients are assisted to achieve and maintain their maximum potential levels of health and ability. The period of time during which care is required is unpredictable but usually consists of a matter of months or years.

Continuity of Care

Internal/external collaboration between partners in the continuum of care resulting in the appropriate linkages and follow-through of care and service.

Continuum of Care

A full range of flexible, effectively linked services from institutional care to home-based/community-based care.
Critical Mass

The optimum threshold for levels of service delivery at which resources are efficiently utilized.

Day Surgery

A hospital encounter between three and 24 hours duration, which typically involves a surgical, diagnostic or therapeutic procedure.

Decision Making

A behaviour exhibited in making a selection and implementing a course of action from alternatives. It may or may not be the result of an immediate problem.

Diagnostic Services

Services supporting the diagnosis of disease, e.g. laboratory, diagnostic imaging (X-ray).

Dialysis

A technique used to remove waste products from the blood and excess fluid from the body as a treatment for kidney failure. There are two methods of dialysis - hemodialysis which filters out wastes by passing blood through an artificial kidney machine and peritoneal dialysis which filters waste via a catheter inserted into the abdomen.

Effectiveness

Probability of benefit to patients from a specific medical service under average conditions of use, i.e. treatment or service produces the desired outcomes.
Efficient
An effort produced with the least expenditure of resources, i.e. the most streamlined use of resources (time, tests, equipment, facilities) to achieve the desired outcomes.

Elective Surgery
Optional, not necessarily urgent surgery.

Emergency Services
Care provided to emergency or urgent walk-in patients, who are not admitted immediately after the encounter.

Empowerment
The act of giving people the authority, responsibility, and freedom to act on what they know and make decisions that affect their work.

Ethnocultural
Pertaining to race and practices/characteristics of the race.

FTE - Full-Time Equivalent
A measure of hospital staffing resources based on the annual hours of work by a full-time employee - 1950 hours.

Geriatric
Pertaining to old age.

Greater Toronto Area (GTA)
The term used to refer to the areas of Metropolitan Toronto and the Regions of Halton, Peel, York, and Durham.
Inpatients

A hospital admission to and discharge from an inpatient bed, for which an Canadian Institute for Health Information (CIHI) inpatient discharge abstract is prepared. Typically the patient remains in hospital for more than 24 hours but can be less.

Integration

The coordination of a range of services and their delivery. Integration involves coordination in the structures and practices among hospitals and the broader health care system.

Laparoscopic Surgery

A method of directly examining the interior of the abdomen by means of a laproscope (viewing instrument) and repairing/removing tissue.

Leadership

The process of influencing people to accomplish goals.

Leadership Styles

Different combinations of tasks and relationship behaviours used to influence others to accomplish goals.

Length of Stay (LOS)

The amount of time, usually measured in days, spent by a patient in a hospital.

Levels of Care

Categorization of care according to degree of medical and/or technological specialization normally required (e.g. primary, secondary, tertiary, quaternary).
Linkages
The establishment of connections between individuals and the appropriate services to meet their needs, or between services to strengthen and enhance the delivery of care.

Long-Term Care (LTC)
Institutional or community care provided for people with chronic illness or disability.

Magnetic Resonance Imaging (MRI)
A diagnostic technique that provides high quality cross-sectional or three dimensional images of organs and structures within the body without using X-rays or other radiation.

Management
The coordination and integration of resources through planning, organizing, coordinating, directing, and controlling in order to accomplish specific institutional goals and objectives.

Mental Health Reform
Ontario government policy to shift focus of mental health services from institutional to community-based care.

Neonatological Services
Care of newborns and the diagnosis and treatment of disorders of newborn infants.

Organizational Culture
The shared values, beliefs, and assumptions that exist within an organization.

Outpatient
Care provided to a patient that does not necessitate admission of the patient to an inpatient bed.
**Palliative Care**

Care provided by an interdisciplinary team for patients who are terminally ill. This care is aimed at providing comfort and support to the patient and family throughout the death process. It addresses the full range of physical, psychological, social, spiritual and economic needs of the patient.

**Patient Service Group (PSG)**

An array of services, skills, technologies and other resources provided by hospitals in response to the identified or anticipated needs of a specific group of patients.

**Performance Parameters (Indicators)**

Quantitative measures of hospital admissions, length of stay, and discharge management.

**Primary Care**

Care provided by a health care worker on a patient’s first encounter with the health care system. Primary care may include referral to more specialized levels of care.

**Profession**

A profession is defined as a calling, a vocation, or form of employment that provides needed service to society and possesses characteristics of expertise, autonomy, long academic preparation, commitment, and responsibility. Professions tend to have a complex knowledge base, minimal societal control over practice and are organized within themselves for effective control of practice.
Quaternary Care
Highly specialized tertiary services usually available in only a single site serving a large urban population, e.g. heart, lung or liver transplants.

Rehabilitation
The provision of time-limited therapeutic services geared towards the restoration or optimization of health, physical or other ability.

Renal
A term meaning related to the kidney.

Resource Intensity Weight (RIW’s)
A measure of the average resource consumption associated with a case mix group, the average relative cost of similar types of cases.

Same-Day-Surgery
Surgery completed in a short time that allows a patient to return home without an overnight stay in hospital.

Secondary Care
Care provided by a specialist health care professional, such as a psychiatrist or general surgeon, on referral from a primary care physician.

Separations
Patient discharges.
**Team Building**

The process of deliberately creating and unifying a group into a functional work unit so those specific goals are accomplished.

**Tertiary Care**

Care that requires highly specialized skills, technology and support services. Usually provided in facilities serving a large region or the province as a whole.

**Therapeutic Services**

Services provided to patients to treat disease.

**Transitional Care**

Convalescent care provided to support transfer of patients from acute care to home or other place of residence.
Appendix B

Summary of Educational Programs Offered at Scarborough General Hospital

1994 - 1997 - Information Services
Training sessions for all staff on all Information Technology applications: Meditech, workload measurement, e-mail etc.

Management Council Retreats

Board Retreats and Board Educational Sessions:

1994/95
Creating a positive image for SGH - Nancy Coldham, CG Communications
Meeting the challenge in a changing health care environment
District Health Council Restructuring Project - D. Gail Donner
Responsibilities of Board members - Reno Stradiotto, Borden & Elliot
Multi-service Agencies - Odette Marahaj, Scarborough Support services
Critical Success Factors Project focus group - Andrew Vaz, Ernst & Young
Draft Regional plan - overview
Strategic Plan and Response to the Scarborough Hospital’s Group Regional Plan
Multi-culturalism Yasmin Vali, Ethno-racial Patient Relations Coordinator
1995/1996

Health Insurance Reciprocal of Canada (HIROC) Presentation
District Health Council Restructuring Report
Ethics - Dr. Cameron
Strategic Alliances
Early Retirement and Voluntary Separation Incentive Program
Hospital Image Focus Group
Shared Regional Laboratory Project - update of progress

1996/1997

New Organizational Structure
Shared Decision-Making Program
Accreditation Survey Feedback
Care Pathways and Patient Aggregation
Health Services Restructuring Report
Financial Statements - tutorial on how to read and interpret
Strategic Planning Retreat - Environmental Scanning - Bob Bell, Ernst and Young

Educational Service Programs for Staff:

The programs listed below are only some of the sessions offered by the Department of Educational Services but give an overview of the type of education offered to support staff in the transition to new structures and new methods.
- 1994

Workplace Equity Education - Harassment in the Workplace (mandatory for all staff)

Review of Developments in Long Term Care Reform - impacts for SGH

Chronic Care - Review of past, present and future

Safety Fair

Emergency Measures Review Week

Retirement Planning

Heart Health Day

Customer Service - approximately 15 different sessions in 1994

Coaching for Commitment - several sessions offered

Training the Trainer - how to train, aimed at new trainers

Presentation skills

Taking charge Workshops - for RN’s, several sessions offered

Quality Week - displays and presentations

Non-violent Crisis Intervention - several sessions offered

Retirement Workshops

CQI Basic Training - Train the trainer workshops

Secretaries Network - Computers, ergonomics, and your health

The Meeting Management Workshop

Infection Control Day
Code Orange - Round Table Discussions

Code White - Roundtable Discussions

- 1995

Rounds - Cocaine, Maternal drug use and its affects on the newborn

Physical Assessment Course - RN’s - offered twice

Emergency Measures Week

College of Nurses of Ontario regulations re competence, professional misconduct and incapacity, and abuse of patients

Substitute Decisions Act, Consent to Treatment Act, Advocacy Act - Information session

Heart Day - Awareness and lecture

Lunch and Learn - Expanding your computer knowledge

Unit clerk transcription course

Crisis Intervention refresher courses

Non-violent crisis intervention course - offered several times

Secretaries Network - Overview of SGH’s Strategic Plan and various computer applications

Ethno-racial - Tamil culture

Diversity in the Workplace - workshops

Project Management sessions

Nursing and the real Issue of Abuse - College of Nurses presentation

Interpreter workshops
Process Mapping Sessions

Facilitator (CQI) workshops

Prevention of Abuse Programs - CNO presentations

How to conduct surveys and questionnaires workshops

Dashboard indicators sessions

Patient Service Associate preparatory sessions - awareness of multiskilling role

Diversity awareness session - the needs of Hindu patients/families

Change sessions

- 1996

Cancer Care forums - Public also invited

Managing difficult Behaviours

Secretaries Network - Changing role of the secretary/Unit clerks

Career Management Workshops

Patient Service Associate training sessions

Change Workshops

Interpreter Workshops

Getting the most out of meetings

Celebration of Learning Sessions - lecture on entre and intrapreneurship

Leadership Clinics - An introduction to Myers Briggs Type indicator
- 1997

Ethic Roundtable - Care of Stroke patients

Planning your future workshops

Leadership Clinics - Facilitation

Leadership Clinics - Coaching

College of Nurses - Accountability and Responsibility

High Performance and Team Leadership

Career Opportunities

Leadership Workshops for Management Council Members